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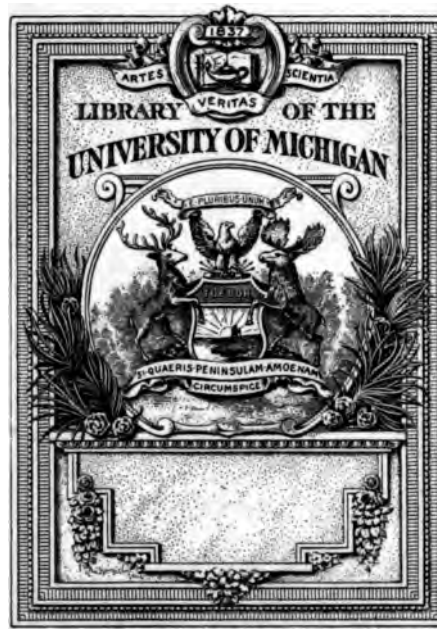

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JUVENILE CRIME AND REFORMATION

INCLUDING

STIGMATA OF DEGENERATION

BEING A HEARING ON THE BILL (H. R. 16733) TO ESTABLISH A LABORATORY FOR THE STUDY OF THE CRIMINAL, PAUPER, AND DEFECTIVE CLASSES

BY ARTHUR MACDONALD

HONORARY PRESIDENT OF THE "THIRD INTERNATIONAL CONGRESS OF CRIMINAL ANTHROPOLOGY" OF EUROPE

BEFORE A SUB-JUDICIARY COMMITTEE OF THE UNITED STATES HOUSE OF REPRESENTATIVES

HON. JOH. A. STERLING (*Chairman*), of Illinois
HON. REUBEN O. MOON, of Pennsylvania
HON. CHARLES C. REID, of Arkansas

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JUVENILE CRIME AND REFORMATION.

THURSDAY, *March 6, 1908.*

The subcommittee met at 10.30 a. m.

The CHAIRMAN (Mr. Sterling). Arthur MacDonald is present to give a hearing on bill H. R. 16733, to establish a laboratory for the study of the criminal, pauper, and defective classes. This bill was introduced by me and referred to the Committee on the Judiciary. The chairman (Mr. Jenkins) referred it to this subcommittee. The bill is as follows:

[H. R. 16733, Sixtieth Congress, first session.]

A BILL To establish a laboratory for the study of the criminal, pauper, and defective classes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be established at Washington, in the District of Columbia, a laboratory for the study of the abnormal classes, and the work shall include not only laboratory investigations, but also the collection of sociological and pathological data, especially such as may be found in institutions for the criminal, pauper, and defective classes, and generally in hospitals and other institutions; said laboratory and work shall be in charge of a director, who shall be appointed by the President, by and with the advice and consent of the Senate. He shall make a report once a year, which shall be published. For the proper equipment of and carrying on the work of said laboratory, with the rental of suitable rooms, there shall be provided instruments of precision, books, and periodicals.

That the director, if necessary for the proper discharge of his duties, shall place himself in communication with State or municipal officials of this or other countries. He shall be a man with university training and an investigator in criminology.

In addition to the general work of the laboratory the director may, at his discretion, gather such further data as might be used for criminal identification, as plates, photographs, outline pictures, descriptions, finger prints, information and measurements of all persons who have been or may be convicted and imprisoned for violating any criminal laws of the United States or of any State: *Provided*, That the constituted authorities of the several States, or of their municipalities, shall provide the same; and that such data shall not be employed for any personal or private use, but only for the detection and prevention of crime and scientific purposes.

STATEMENT OF ARTHUR MACDONALD.

For a number of years I have been endeavoring to have bills introduced not only in Congress and the States of the Union but in all legislatures of the world for founding laboratories to find the best methods of preventing crime, pauperism, and defectiveness, the most constant, most costly, and greatest enemies of all government. This will furnish opportunities for thoroughly trained men to devote their lives to this work, and may prevent crime, pauperism, and defectiveness from extending their roots still deeper into the social organism.

One idea pervading this bill is that governments should look after the moral health of the people with as much scientific foresight as they do the physical health of the people. Such work is fundamentally humanitarian. The task is large enough to require the aid of all forms of government, and it is due time that such efforts be made; for the official statistics of the leading countries of the world show that within the last thirty or more years crime, suicide, insanity, and

other forms of abnormality have been increasing relatively faster than the population.[a]

Since the care, support, and direction of inmates of institutions for the abnormal and weakling classes are under City, State, and Federal control, the scientific and sociologic study of these inmates naturally falls under the same control.

Should there be any question as to such investigations infringing upon the rights of the States, it may be said that there is abundant material in the Federal institutions alone for such work.

The great progress already made by governmental scientific investigation of physical disease suggests governmental application of similar methods in the study of moral and social disease, the necessity of preventing or lessening which is much more urgent.

One reason why so many professional organizations[b] dealing first-hand with some phase of this work support this measure is that they think it is time that governments begin a serious study of those social evils which are their greatest enemies. Many worthy efforts are being made to lessen social evils, but they are mostly palliative, and do not go to the root of the matter. It is not intended here to criticise in the least any effort to alleviate suffering, but such alleviation is usually temporary and may even increase the disease. The investigation of causes is therefore imperative, and this can not be done without scientific study of the individuals themselves. It is due time that such study receive help.

One feature of this work, of interest to all lovers of truth, is the application of the results and methods of anthropology, psychology, medicine, sociology, and other sciences to the abnormal and weakling classes, thus constituting a new synthetic study, which may bring out truths that apply as well to normal man as to abnormal man; for in the case of penal institutions most of the inmates are normal, their crime being due to unfortunate surroundings and not to their inward natures. Even really abnormal persons, that is, those positively abnormal in at least a few respects, are nevertheless normal in most things, so that whatever be found true of them is to a large extent true of all persons. Though such results be incidental, they may be none the less important.

For many points omitted in this work the reader is referred to Senate Document No. 187, Fifty-eighth Congress, third session, entitled, "Man and Abnormal Man," which deals with social pathology in general.

As in machinery we must first repair the wheels out of gear, so in society we must first study the criminal, crank, insane, inebriate, or pauper who can seriously injure both individual and community. Thus a worthless crank, by killing a prominent citizen, can paralyze the community. The injury from such action is often beyond calculation. Governments pay out millions to catch, try, and care for criminals, but give very little to study the causes that lead to crime.

Some ninety learned bodies in science, medicine, law, and religion for the last six or seven years have been asking Congress for the enactment of this or some similar bill into a law. A list of these organizations is given below. They represent more than 100,000 leading professional men from all sections of our country.

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[a] See Senate Document No. 187, pp. 439–441 (58th Cong., 3d sess.), entitled "Man and Abnormal Man."

[b] See page 9.

SUMMARY OF INDORSEMENTS OF WORK INCORPORATED IN BILL.

These indorsements are not merely formal, but committees were appointed to examine the work and report to their associations resolutions, with the result that the work has received scientific, medical, legal, and religious support of highest rank. I mention these indorsements, because it can not be expected, as the phases of the bill go into different specialties in medicine and science, that a Senator or Representative can give sufficient time to pass an opinion upon all of them without depending upon authority. For the reason that this bill especially treats of the latest phases of different sciences I have asked the opinion of specialists who deal first-hand with the matter. I have the original papers here, or most of them, of associations which have passed resolutions favoring the bill.

INDORSEMENTS OF SCIENTIFIC AND MEDICAL ASSOCIATIONS.

"V^e Congrès International d'Anthropologie Criminelle, consisting of leading university specialists in Europe.

The Pedagogical Society of the University of Moscow.

The Anthropological Society of Bombay, India.

The Medico-Legal Society of New York.

Six national medical societies:

The American Medical Association.

The Association of American Medical Editors.

American Medico-Psychological Association.

The Association for the Study and Cure of Inebriety.

The American Laryngological Society.

The American Electro-Therapeutic Society.

Twenty-five State medical societies: Connecticut, Colorado, Idaho, Indiana, Kansas, Kentucky, Louisiana, Minnesota, Medical Society of the Missouri Valley. Mississippi Valley Medical Association, New England Psychological Society of Alienists, New England Hospital Society, Medical Association of Central New York, North Dakota, New Jersey, Pennsylvania, Sea-Board Medical Association, Texas, Tri-state Medical Society of Alabama, Georgia, and Tennessee, Utah, Virginia, West Virginia, Wisconsin, and District of Columbia.

LEGAL ASSOCIATIONS INDORSING WORK.

The American Bar Association, the most representative body of the legal profession in the United States.

Four State bar (Indiana, Kansas, Louisiana, New Mexico) and three city bar associations (Indianapolis, Lancaster, Murfreesboro).

RELIGIOUS AND OTHER ASSOCIATIONS INDORSING WORK.

Twenty-five presbyteries in California, Colorado, Illinois, Iowa, New York, Ohio, Pennsylvania, Washington, and Washington City, D. C.

Three State (Massachusetts, Michigan, and New York) and one district Universalist conventions.

One State (Minnesota) and three district (Massachusetts) Unitarian associations.

One Reform Church Classis, three Baptist, and other religious and charitable associations.

Two State conferences of Congregational churches (Rhode Island and Maine) and three State dioceses (Michigan, Central Pennsylvania, and North Carolina).

INDORSEMENTS OF AMERICAN AND EUROPEAN SPECIALISTS.

Fifty-five American and twenty European specialists have written personal letters indorsing work. Most of these specialists are university professors.[a] The others are engaged on the practical side of the work.

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[a] Names of the specialists and universities are given in "Man and Abnormal Man," (pp. 553–554), Senate Document No. 187, 58th Congress, 3d session, 1905, Washington, D. C.

CONGRESSIONAL INDORSEMENTS.

Twenty-two Members of the United States House of Representatives and seventeen Senators have written personal letters recommending the work. Bills or amendments to bills to develop the work have been introduced in Congress from time to time by Senators Bacon, Clark (Wyo.), Hoar, McComas, Money, Patterson, Penrose, Pettigrew, and Quay, and Representatives DeArmond, Henry (Conn.), Hepburn, Ray (N. Y.), Smith (Ky.), and Wanger.

Government documents giving account of work have been introduced by Senators Clapp, Depew, Dubois, Money, Platt (N. Y.), and Quarles.

The Judiciary Committee of the United States House of Representatives unanimously reported in 1902 a bill for a laboratory to develop the work, and the Senate Committee on the Judiciary reported the same bill favorably.

Two legations, two governors, and two mayors have recommended the plan to their respective governments or legislative bodies. Bills[a] have been introduced in the legislatures of New Zealand, New York State (passing the senate), Missouri, and Oregon. Seven Government publications have been issued on the subject. Yet no bill has become law, except perhaps in New Zealand.

PRACTICAL RESULTS.

In every new line of work it is impossible to know in advance the practical results, but it is an axiom of science and sociology that no evil can be *permanently* lessened unless its causes be studied first and that such study produces practical results. Science has demonstrated this fact again and again.

If we find that we can not know the causes, that itself is something to know. If certain cases are beyond doing anything for them, it is important to know it and not waste our time. So, if the knowledge be negative, it might be just as valuable as though it were positive.

"If the student seeking the cause of cholera had been required to state in advance whether he could lessen or cure cholera or not, after he had found its cause, and had been refused aid because such an uncertain work was deemed impracticable, cholera might have been continuing its ravages up to the present time.

"Although no cure has been found, yet the knowledge gained from the study of the cause of this disease has enabled science to prevent it to such an extent that it is now feared no more. To insist on this practical-result requirement in the study of social disease called crime is as unreasonable as it would have been in the case of cholera, and more so, for the ravages of crime exceed many times those of any physical disease."[b]

If the practicability of a new plan of work be a matter of opinion, that opinion has most weight which comes from those dealing *first-hand* with some phase of the work. Such opinion is indicated on pages 8–9, under the head of "Summary of indorsements of work."

The main purpose of this bill is to study the causes of crime, pauperism, alcoholism, defectiveness, degeneracy, and other forms of abnormality, with a view to lessening or preventing them. It is assumed that every statesman is interested in the purpose of such a bill.

In addition to this general scope of the bill there are some other direct ends which eventually the bill is expected to accomplish:

1. To gain more trustworthy knowledge of social evils. Such knowledge would furnish a basis for modifying defective laws, adapting them to present conditions.

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[a] For copies of bills see "Man and Abnormal Man," pp. 9–10.

[b] From address (by writer) on Social Pathology, before the Harvard University Club, of Washington, D. C.

2. To find whether or not there are any physical or mental characteristics that distinguish criminal children from other children. Such knowledge would make it possible to protect children in advance and lessen the chances of contamination.

3. To find whether or not there are any physical and mental characteristics that distinguish habitual from occasional criminals. Such knowledge would enable the community to protect itself in advance from habitual criminals and assist prison officials in preventing them from contaminating other criminals.

4. Exhaustive study of single typical criminals,[a] which represent a large number, will give definite knowledge as to just how men become criminals and to what extent their surroundings influence them as compared with their inward natures. This would make possible a rational application of remedies for these evils.

5. More exact knowledge of the abnormal classes will enable us to manage them better in institutions. Such studies will bring men of better education and training in control of the institutions and increase interest in the *professional* study of these classes.

6. Proper and full statistics of the abnormal classes will alone justify this work. Merely skeleton statistics on this subject are sometimes gathered by governments.

7. As most of the inmates of reformatories and prisons are normal, any knowledge gained about them will be useful to the community at large. A scientific study of moral character can, for instance, be conducted best in such institutions.

8. To summarize and combine results already gathered by City, State, and Federal institutions and governments, encouraging uniformity of method in collecting data and making such data useful generally. Such synthetic work could be done best by the Federal Government.

9. To lessen the enormous expense to governments of the abnormal classes by study of the causes of the evils that involve such expense.

It is not expected that such an extensive field of work, as indicated in bill, be undertaken at the outset. It is therefore suggested that a beginning be made with the criminal classes.

As indicated in the bill, the laboratory should be a bureau by itself, and not a part of any other bureau, no matter how limited in size or number of personelle. Otherwise we might have a director under some bureau chief ignorant of the subject. Such an arrangement might injure the work which is new, requiring not only special knowledge and extensive training, but fullest freedom.

SOME CONCLUSIONS OF CRIMINOLOGY.

1. The prison should be a reformatory and the reformatory a school. The principal object of both should be to teach good mental, moral, and physical habits. Both should be distinctly educational.

2. It is detrimental financially, as well as socially and morally, to release prisoners when there is probability of their returning to crime; for in this case the convict is much less expensive than the ex-convict.

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[a] Detailed study of such cases will be found in "Man and Abnormal Man," pp. 429–438, 515–550.

3. The determinate sentence permits many prisoners to be released who are morally certain to return to crime. The indeterminate sentence is the best method of affording the prisoner an opportunity to reform without exposing society to unnecessary dangers.

4. The ground for the imprisonment of the criminal is, first of all, because he is dangerous to society. This principle avoids the uncertainty that may rest upon the decision as to the degree of freedom of will;[a] for upon this last principle some of the most brutal crimes would receive a light punishment. If a tiger is in the street, the main question is not the degree of his freedom of will or guilt. Every man who is dangerous to property or life, whether insane, criminal, or feeble-minded, should be confined, but not necessarily punished.

5. The publication in the newspapers of criminal details and photographs is a positive evil to society, on account of the law of imitation; and, in addition, it makes the criminal proud of his record, and develops the morbid curiosity of the people; and it is especially the mentally and morally weak who are affected.

6. It is admitted by some of the most intelligent criminals, and by prison officers in general, that the criminal is a fool; for he is opposing himself to the best, the largest, and the strongest portion of society, and is almost sure to fail.

REMEDY.

It is often asked what is the "cure" for crime, implying the idea of some specific remedy. But it is doubtful if any such remedy would be possible. It would be like seeking a specific for general good health. The criminal element in man's nature radiates through the whole man, so that the remedy may be a question of general moral health, for which no specific is adequate. One main remedy is educational, consisting almost wholly in the early training of the young. Anything that tends to make them good citizens helps to prevent crime. Experienced prison officials are almost unanimous in opinion that if one goes wrong after he becomes of age there is little chance for him.

MORALITY CHIEF ELEMENT IN EDUCATION.[b]

One of the main objects of education is to eradicate, or at least modify or correct, unfavorable tendencies in mind, will, and body, and to develop favorable ones. That is, one great purpose of all education should be moral; for an individual may be a good citizen with little knowledge if he has sound morality, but the reverse is not true. Any education or teaching which develops the mind without equally developing the moral impulses may become a dangerous education, for where the recipient goes wrong he is a more astute enemy of society and can do more evil than a thousand citizens can do good. If, as some claim, we must emancipate the mind and liberalize the spirit, we must be all the more solicitous as to moral education; for the old religious ideals are almost inseparably connected with moral ideals, and an effort to separate them may be a reform in

[a] See "Man and Abnormal Man," p. 403.
[b] See "Man and Abnormal Man," pp. 414, 416–421.

the wrong direction. Antireligious intolerance is not only worse, but more injurious, than religious intolerance.[a]

While moral or reformatory education is the most important, it is, strange to say, the most neglected. One of its purposes is to lessen or prevent crime, pauperism, and degeneracy by the teaching of mental, moral, and physical habits, especially to the young, that they may be better protected and prevented from going wrong.

There is a special difficulty in teaching even a minimum system of morality, for the desiderâtum consists not only in inculcating general principles, but by indicating courses of conduct in detail. Generalities elevate the moral tone, but details incarnate the principles.[b]

INMATES OF INSTITUTIONS SHOULD BE STUDIED THOROUGHLY.

The inmates of institutions for the delinquent and dependent differ little or none at all from individuals outside. The excellencies and defects of an educational system can be carefully studied in these institutions, for all are under the same conditions and can be controlled in all details of their life. Here is an opportunity for the rational method of treatment, which is, first, to study the unfavorable characteristics, and, second, to investigate their causes as far as possible. Knowledge thus gained will be the most reliable in correcting evil tendencies or preventing their development. By such a method no sudden results should be expected; gradual progress is all that can be hoped for. A thorough study of this nature in penal and reformatory institutions is possible; the effects of the method of education can be closely observed physically, intellectually, and morally. Thus when, for instance, an inmate ceases to reverse his drinking cup after using it, which is required for purposes of cleanliness and order, this, though a very slight thing in itself, indicates that he is becoming careless and losing his will power to reform. By a sort of radiation other negligences are liable to follow, confirming the direction in which he is tending. A good report from his keeper, on the other hand, can signify a new resolution of the will. Thus a series of records indicate, so to speak, the moral and intellectual pulse of the inmate. What might seem a very slight offense outside of a reformatory institution is not so within, where there is a minimum of temptation to do wrong and a maximum of encouragement to do right, so that there may be a gradual education in the formation of good habits, which are the surest safeguard to the inmate after his release.

THE SAME TRAINING FOR NORMAL AND ABNORMAL.[c]

The training that must be relied upon to bring about the change in the abnormal character does not differ from the training that develops character and ability in the case of the normal individual. It endeavors to supply those things that the inmate has failed to receive in his earlier training. Among the very common neglects of

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[a] From an address (by author) before the Mary Washington Chapter of the Daughters of the American Revolution.

[b] See pp. 416–421 of "Man and Abnormal Man."

[c] See "Man and Abnormal Man," p. 402.

his early life is that of school attendance. To make up for this he is placed in school. The fact that the same functions are involved in both normal and abnormal processes (mental and physical) is one explanation why the same methods of education are applicable to both.

Many agencies are operating to drag children down. Homes broken by death, divorce, and desertion; parents utterly unfit for parenthood; stepfathers and stepmothers who have no love for their unfortunate stepchildren; evil companionship, poverty, and other forces are increasing the delinquent class who must be cared for. The one great defect is moral weakness. There is some mental, some physical, delinquency, but every inmate sent us, in the words of an experienced superintendent, is weak morally. He has little or no conscience. The delinquent inmate was never trained to feel the sinfulness of wrongdoing. His only concern is not to get caught. With a disposition to profanity, untruthfulness, and larceny, it is a difficult task to so teach, train, and reform an inmate in a short space of time that he may go forth and develop into a good citizen.

PALLIATIVE MEASURES NOT SUFFICIENT.

To help the child withstand modern temptations there is more need than ever of right moral feeling, firmness of will, and moral resistance; such characteristics can not be produced by theoretical teaching alone. For though the children of the weakling classes may remain six hours in school, the rest of their time is spent in abodes of crime, squalid homes, or vicious idleness. While the reform schools are doing much, they do not reach, however, the very young at a time when influences for evil can leave indelible impressions. If these unfortunate children are to be educated morally and intellectually, it is evident that this can not be done unless they are removed from their pernicious surroundings. Early prevention is the most effective of all reforms. Philanthopic efforts are being directed to this end, but they have not proved sufficient, for their support is not always assured, and not infrequently they are of a sporadic or palliative nature. It would seem, if anything permanent and effective is to be accomplished, Federal, State and city endowment must provide for more fundamental measures.

ABOUT THREE-FOURTHS ARE REFORMED.

The statistics given by English and American reformatories[a] indicate that nearly three-fourths of their inmates are reformed. A few who do not seem to be improved by reformatories are treated in various ways. Thus two boys who were vagabonds and thieves were sent to a family in the mountains, where they had a bed to themselves and regular place at table and attended school. In two years they were completely transformed.

HOPELESS CASES VERY FEW.

The number of hopeless cases is very small. The wonder is that there are not more, when the wretched surroundings of some children are considered.

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[a] See Section XIV, entitled "Reformatory Statistics."

As children are sometimes born with strong tendencies or susceptibility to disease and become weak and puny, so others are born with feeble moral tendencies to such a degree that reformation is impossible, especially where such weaknesses have been allowed to develop. These are frequently cases of moral degeneracy with strong hereditary taint. In some instances it would be as difficult to reform their characters as to change the shape of their heads.

ACTUAL CONDITION OF WEAKLING CLASSES.[a]

According to the most thorough study yet made of the conditions of the weakling classes, 10 per cent of the children attending school are in want of food. Some come without breakfast because the parents do not get it for them. As a little boy said, "his mother got drunk and could not get up to get it." Such children are very irregular in attendance, which is a great annoyance to a teacher, not to say a waste of public money. Such children live in the poorest neighborhood; they have no regular meals; fully a third live in one room with their parents; their waking hours are divided between school and the street; saloons are sometimes as numerous as one to every hundred adults; those on the verge of pauperism patronize them. Yet there is good order in these schools; the street urchins are trained to respond to right rule, affording ground for hope as to their future. At home they have no training; they need encouragement; they should be lifted up from their surroundings and gain a taste for better things. The difficulty is caused more frequently by poverty and shiftlessness at home than by neglect and vice, yet the latter have great influence. Compulsion in its ordinary form is practically useless in making such children regular in attendance at school. The parents are characterized by improvidence, want of purpose, and no regard for the future of their children. As soon as their boy is through with school he is put on work which prepares him for nothing, and thus he drifts into casual employment, trusts to chance for a living, and gradually sinks. The poverty, misery, and vice of the next generation will to a large extent come from the slum children. Their need is education in habits of decency, cleanliness, self-respect, the rudiments of civilization and domestic life; their instruction should not be too abstract nor technical in the sense of fitting them for competitive examinations, clerkships, or college, but rather for the workshop, factory, trades, or the home.

STUDY OF CAUSES FIRST, THEN REMEDY.

The main question at first is not remedy, however pressing the need be, but causes. The nature of the criminal individual must be studied and how and to what extent his environment affects him. This involves a study of the person himself in his moral, mental, and physical nature and his deterioration and degeneration. The difficulties involved are perhaps one of the reasons why such study is so rarely undertaken.

Remedies proposed are necessarily speculative or problematical, and when tried have often turned out to be more or less failures; for

[a] See p. 400 of "Man and Abnormal Man."

crime and other forms of abnormality have been increasing relatively faster than the population, and this for the last thirty or forty years.

What these remedies or methods may be cannot be determined until a thorough, patient, and systematic study of causes has been undertaken.

THE STUDY OF CRIMINALS SHOULD BEGIN WITH THE YOUNG.[a]

In the study of man the individuals themselves must be investigated. As the seeds of evil are usually sown in childhood and youth, it is here that all inquiry should commence, for there is little hope of making the world better if we do not seek the causes of social evils at their beginnings.

Much money has been given and great interest manifested for the discovery of new chemical elements or the search for unknown planets. We erect statues and found art galleries at great expense. These things may not all be immediately useful. Indeed, the highest art spurns even the idea of utility; and yet when it is proposed to study a child thoroughly to gain an insight into its nature, to find the causes of its defects, so that we may protect it and help it to become a good citizen, the utilitarian cry is heard. The time has come when it is important to study a child with as much exactness as we investigate the chemical elements of a stone or measure the mountains on the moon.

If facts about children, whether immediately useful or not, are not important, we desire to ask what is important in life?

As an illustration of such investigation I give the following plan: To study 1,000 boys in industrial schools, ages from 6 to 15; 1,000 boys in reformatories, ages from 15 to 30; this investigation to consist in a physical, mental, moral, anthropological, social, and medico-social study of each boy, including such data as are deemed most important from these several points of view. The general plan would be to employ specialists in psychology, medicine, and anthropology, the work of the director being in the main to conduct the plan and give the results and their import. Just what data would be taken would depend in part on the views of each specialist, but probably among these would be: Age, date of birth, height, weight, sitting height; color of hair, eyes, skin; first born, second born, or later born; strength of hand grasp, left handed; length, width, and circumference of head; distance between zygomatic arches, corners of eyes; length and width of ears, hands, and mouth; thickness of lips, measurements of sensibility to heat and pain; examination of lungs, eyes, pulse, and respiration; nationality, occupation, education, and social condition of parents; whether one or both are dead or drunkards; stepchildren or not, hereditary taint, stigmata of degeneration. All data gathered by the institutions as history and conduct of inmates might be utilized.

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[a] In a work entitled "Man and Abnormal Man" (Senate Document 187, 58th Cong., 3d sess.), and in a hearing on similar bill before the House Judiciary Committee in 1902 I considered crime in general. Here I desire to treat more especially of crime among the young, presenting new matter almost entirely, except the chapter on instruments of precision, which is given for convenience, being reprinted from the Senate Document mentioned above.

By such study the causes of juvenile crime might be more definitely determined; also the differences between occasional and habitual criminals. One idea also is to study a small number more thoroughly rather than a larger number less minutely, so that unforeseen errors may be less costly. Such a pioneer and preliminary inquiry might also suggest better methods for the study of larger numbers and constitute a much needed propædeutic.[a]

Much work could also be done, not only in original research, but in giving the results of recent investigations by university specialists in foreign countries.

THE CHILD INCLINED TOWARD EVIL.[b]

A young animal seldom utters a cry except when hungry or in pain, but a young child will cry sometimes an entire hour though neither hungry nor suffering from pain.

A few days after birth the young animal becomes an object of pleasure and interest, but the little child, even when several years of age, soils its clothes and itself. Many a child cries while being washed or even when its nose is wiped. It takes a long training to make a child appreciate the advantages of cleanliness.

The young animal is modest and gentle, but the little child wants everything in sight; if his whims be not satisfied he cries out. Its egotism and bad impulses are in evidence; it seems to have a natural tendency to evil. A child, though without hereditary taint, with no malformation to retard its development, if left to itself, will generally turn toward the evil.

YOUNGER CRIMINALS IN COURT.

It is a serious statement to make that children called before the courts are becoming younger and younger. The public who frequent the courts are not surprised to see young persons guilty of most serious crimes, many of whom have been convicted before.

But there are numerous children who commit crimes against parents or employers whose deeds are concealed, though many such crimes are very serious. The solicitation for the future of such children is very great.

While such cases should be kept from publicity, they should nevertheless be studied, for the primary causes of their misdeeds lie without doubt in the nature of the children themselves. Such youth are liable to commit crime at any time; and a knowledge of them may aid rather in preventing this than in trying to cure them after they have become criminals.

It is a common idea that with the poor only and the daily laborers young criminals are found. True, these are the ones best known, because their parents have not the advantages that money can give to settle the matter and prevent publicity.

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[a] See "Man and Abnormal Man," pp. 15–16, 397, 399–401.
[b] See "Man and Abnormal Man," pp. 496–497.

I.—STUDIES OF JUVENILE CRIMINALS.

The scientific study of crime is in its beginning, but the investigation of criminal youth is still more exceptional. It may therefore be of interest and value to give results of three studies in juvenile crime. One consists mainly in observations of the physical defects of 65 young persons. Another is a more general study of 200 children from 6 to 12 years of age in a reformatory. The third is a special investigation of a "criminal-born child." While these results are quite incomplete, yet it is hoped that they may serve as a suggestion for further inquiry along these lines.

SOME PHYSICAL DEFECTS OF 65 YOUNG CRIMINALS.[a]

Table No. 1 gives the percentage in order of frequency of some prominent physical defects of 65 young criminals.

Some of these defects are normal in lower races and in animals, and favor the theory that the criminal is a reversion to a lower type. While it is doubtless true that these criminals have more physical defects than people in general, yet it is impossible to say just how many more, since a sufficient number of people in general have not as yet been studied with a thoroughness adequate to warrant trustworthy comparison.[b] Notwithstanding the advancement of this age, the serious study of normal living man has hardly commenced.

TABLE 1.

Per cent.	Defects.	Per cent.	Defects.
75	Arm-reach greater than height.	37	Antitragus of ear large.
68	Projection of lower jaw.	37	Helix of ear rudimentary or absent.
68	Defective palate.	35	Thick lips.
65	Ears standing out.	34	Face not symmetrical.
65	Ears adherent.	34	Length of fingers greater than that of palm.
56	Head defective in shape.	32	Mouth kept open.
53	Bumps on forehead prominent.	28	Skin dark.
52	Prominent cheek bones.	25	Nose crooked.
51	Teeth defective.	21	Hairy skin.
37	Occipital protuberance large.		

TABLE 2.

Antecedents of 45 young criminals.	No.	Per cent.	Antecedents of 45 young criminals.	No.	Per cent.
Insanity:			Nervous diseases—Continued.		
Father	0	0.0	Other relatives	43	95.55
Mother	4	8.88	Alcoholism:		
Paternal and maternal relatives	17	37.77	Father	22	43.88
In all	21	46.66	Mother	3	6.55
Mental backwardness	9	20.00	Other relatives	28	62.22
Epilepsy or convulsions	16	32.00	Excess of coffee drinking:		
Hysteria	12	26.66	Father	9	20.00
Nervous character:			Mother	6	13.33
Father	17	37.77	Other relatives	9	20.00
Mother	23	51.51	Lung diseases:		
Other relatives	35	77.77	Father	8	17.77
Nervous diseases:			Mother	2	4.44
Father	3	6.66	Other relatives	29	64.44
Mother	6	13.33			

[a] For complete list of these defects, see page 32.
[b] See "Man and abnormal man," page 490.

ANTECEDENTS.

Of the 65 criminals studied it was possible to obtain data as to antecedents in only 45 cases. The number of defects is doubtless much below the reality, as there are so many temptations to conceal them. The most frequent hereditary taints are: (1) Nervous diseases, 95 per cent; (2) lung diseases, 64 per cent; (3) alcoholism, 62 per cent; (4) insanity, 47 per cent; (5) epilepsy, 32 per cent; (6) mental backwardness, 20 per cent.

The prominence of nervous diseases suggests the results of extreme pressure due to the abnormal conditions of modern life. The author has indicated this in detail in Senate Document entitled "Man and abnormal man," pages 440–441, 446.

A STUDY OF 200 CHILDREN FROM 6 TO 12 YEARS OF AGE IN A REFORMATORY.

Of these children 134 were abandoned children, 13 had been in the poorhouse, and the majority of these had committed crime before, 44 had been vagabonds, and 19 beggars, 146 thieves, and 33 embezzlers. The social surroundings of those children were substantially the same, coming from the lower classes and being in the same institution, having the same school advantages, and being born in the same city.

In 10 cases the father was insane, in 14 the mother; epilepsy was found in the father in 11 instances, in the mother 15 times, and in sisters and brothers 7 times. Other nervous diseases were found in the father in 2 cases, and in the mother in 24 cases. In 78 cases the father was an alcoholic, in 5 the mother, and in 2 both parents; 22½ per cent (45) were illegitimate, about 10 per cent more than the general average for the city.

In 47 cases the father was dead, in 29 the mother, and in 13 both parents; in 15 cases the father and mother lived apart, and in 4 cases they lived in concubinage. There now remain 80 cases in which the children might have normal home training, but unfortunately, in 48 of these the father, in 24 the mother, and in 15 both parents, left home in the daytime to go out to work. In 6 cases extreme poverty and in 15 sickness of parents prevented the children from having any education and training.

It is noteworthy that so few of the parents were criminals; in 8 cases the father and in 7 the mother had been convicted of crime.

In 24 children rickets was present, in 9 hereditary syphilis, in 12 scrofula, in 4 hydrocephalus, in 49 there were found injuries or wounds on the head, 15 of which must have affected the mental condition. In 25 cases there were chronic diseases.

In at least 68 children there was mental weakness; of these 35 were morally deficient, 7 were hysterical, 5 had paronoia.

In 52 cases the anterior circumference of the head was greater than the posterior, and in 122 instances the reverse was true; in 26 cases the two circumferences were equal, 128 were brachycephalic, 58 mesocephalic, and 14 dolechocephalic.

There were 4 cases of microcephaly, 9 of trochocephaly, 36 showed a degree of asymmetry, 49 limbose coronal suture, 32 bulging out of the parietal eminence, 14 a depression in the parietal occipital region, 21 with retreating forehead, 11 with large superciliary

ridges, 12 with temporal muscle, 19 with irregular limits to where the hair begins, 30 with wrinkles in the forehead, 12 with asymmetrical spots in the iris, 30 with adherent ear lobes, 17 with ears unsymmetrical as to size and insertion, 31 with Darwinian nodules, 20 with Wildermuth ear, 14 with decayed teeth, 21 with gap in row of teeth, 39 with irregularly inserted teeth, 43 with high standing gums, 41 with torsus palatinus, 26 with birthmarks. Other stigmata were found in 134 cases. Of the 83 normal children there were only 5 with no stigma.

There was no unusual number with abnormal sensibilities. There was no conspicuous abtuseness to pain. The general physical development of the children was good, corresponding to the favorable hygienic conditions in which they lived. A striking physical development was noted in 17 cases, and a very defective one in 7 cases; 4 were left-handed and 1 ambidextrous.

Nervous abnormalities were not specially frequent; 10 had strabismus, 17 difference of pupils, 23 facial irregularities, 16 with no abdominal reflex, 6 had convulsive tics, and 8 stuttered; 17 others had various nervous abnormalities.

Out of the 200, 83 were tattooed, a relatively large number. The tattooing consisted in the simplest forms, as heart, arrow, crown, coat of arms, initials, banner, cross, anvil, anchor, ship, sailor, dolphin, snake, women, bracelet, ring, head, athlete, dumb-bell, Indian, tomahawk, horse's head, clown, half-moon. The location of the tattooing was on the arm, except in three cases, in which it was on the breast. Of the 83 normal children 32 were tattooed; of the 68 mentally defective 21 were tattooed. The cause of the tattooing was due mostly to imitation, it being a common practice in the institution.

TABLE 3.

Ear.	Criminal, per cent.	Normal, per cent.		Insane, per cent.
		Men.	Women.	
Pavillion regular	29.2	50.55	62	46
Lobe adherent	25	26	13	39
Outjutting	24	12.5	3.2	4.2
Of Wildermuth	18	6.2	9.12	6.26
Antihelix prominent	14.2	.....	11.5	26

We will add here a few tables giving the results of some minor studies. Table 3 gives the results of study of the ears in different classes of people by Gradenigo.

Table 4 gives the results of the investigations of Ottolenghi and Maupaté as regards the nose in thieves.

TABLE 4.

Nose in thieves.	Ottolenghi, per cent.	Maupaté, per cent.	Nose in thieves.	Ottolenghi, per cent.	Maupaté, per cent.
Rectilinear	40.00	50.0	Large	53.28	18.75
Concave	23.00	37.5	Flat	31.33	.....
Base elevated	32.13	31.25	Crooked	37.50	37.5
Short	30.92	.....			

It has been said that thieves have large noses and swindlers pointed noses, but the number investigated is so small as to make such a conclusion merely tentative.

Marro gives in Table 5 the antecedents of criminals indicating the possible influence of hereditary conditions. Alcoholism, cerebro-spinal diseases, and immorality in character play the most prominent part.

TABLE 5.

Antecedents.	Father, per cent.	Mother, per cent.	Ancestors, paternal, per cent.	Ancestors, maternal, per cent.
Alcoholism	41	5.1	.....	.....
Old age	32	17	.....	.....
Insanity	9.2	3.3	2.7	4.1
Cerebro-spinal diseases	21.1	18	.....	.....
Epilepsy	1.7	.9	.1	.1
Immorality or violent temper	22.6	11.3	.....	.....
Consumptoin	5.1	10.1	.....	.....
Criminality	3.3	.3	.....	.....

According to Lombroso and Blomberg those addicted to the use of alcoholic liquors are frequent among the antecedents of thieves, as indicated in Table 6.

TABLE 6.

Epilepsy in parents of—	Lombroso, per cent.	Marro, per cent.	Epilepsy in parents of—	Lombroso, per cent.	Marro, per cent.
Thieves	2.1	3.3	Insanity in parents:		
Violators	1.2	.....	Thieves	6.4	14.5
Suicide of parents:			Parents addicted to drink:		
Thieves	5.0	5.1	Thieves	14.3	46.0
Violators	3.9	.....			

THE CRIMINAL-BORN CHILD.

In accordance with the belief of Dietrich, the child to be described illustrates the criminal type.

Carlo was 10 years old, 110 centimeters in height, weight 18 kilograms, length of head 170 millimeters, width of head 140 millimeters, circumference of head 505 millimeters. The child was very short for its age, its head was very large (macrocephaly), its eyes large, glistening, and projecting prominently from the orbits. A little down covered the forehead. The child had a snub-nose, the sutures of the head were prominent and easy to feel, the teeth were very small and irregularly arranged, and the zygoma were prominent. The visual field was abnormal, showing peripheral scotoma. The esthesiometer gave 2.2 on right wrist, 2 on left wrist, and 2 on the tongue. Electrical sensibility on right 40, on left 15; sensibility to pain on right 15, on left 25. The father died of pneumonia at 41; he was a strong drinker; the mother died at 31 of uterine trouble; was always sickly; had seven children, of whom three are living.

Right after its birth the child was difficult to treat and caused the nurse much trouble; at 18 months of age the child began secret habits, and no way could be found to prevent them. When larger he would bite and scratch other children. He began to drink wine. He was a liar. He began to steal when 2 years of age. The child since its birth had been subject to starting up in its sleep and to spells of vertigo.

He was very uncleanly. At school his desire to steal increased continually; he would steal from his schoolmates; he would put his hand into the pocket of his sister, stealing her money to buy candy. He read bad books. He was very fond of his aunt, and was sent to her after the death of his mother. He had an intense hatred for anyone who did him the least wrong, and sought opportunity for revenge.

According to Dietrich the following are some of the principal stigmata of the criminal type: Plagiocephaly, megalocephaly, microcephaly, prognathism, irregularity of teeth, ears outstanding, hypertrophy of genital organs, asymmetry of face, inequality of body, especially the eyes, ears, hands, and feet. In many cases bad secret habits are practiced from the earliest periods. It should be noted that no individual would have all those stigmata, yet would have some of them in a striking way.

REFERENCES.

1. Senate Document No. 187, Fifty-eighth Congress, third session.
2. Maupaté. Recherches d'Anthropologie Criminelle chez les enfants.
3. A Plan for the Study of Man (by writer), Senate Document No. 400, Fifty-seventh Congress, first session.
4. L'enfant criminal-né, Centralblatt für Nervenheilkunde und Psychiatrie, 1894.

II.—DECAY OF FAMILY LIFE AND INCREASE OF CHILD CRIME.

Now and then in different countries fears are expressed that the number of births is scarcely enough to compensate for the deaths. Not only is a tendency to sterility increasing, but people seem to care less for their offspring. Infant asylums, orphanages, poorhouses, and charitable institutions generally are increasing. The number of the disinherited, thrown upon public or private charity, grows daily. New institutions are being opened to palliate new miseries, seeking the aid of the State or community. But, strange to say, the family is being effaced; its rôle is lessened, family training and education are becoming a luxury.

On the one hand, the increase in the struggle for existence; on the other hand, desire for ease and pleasure, which characterizes our age; in a word, misery and selfishness, cause the reduction of births and the abandonment of the child to the charge of servants, who relieve the parents of all care and anxiety.

Sometimes children are much inferior to their parents. This may be due to the influence of servants from whom the children receive most of their early training.

CAUSES.

According to Tarde, the causes of the great increase of crime are, in part, the same as those which cause the diminution of births. The propagation of doctrines which have destroyed the traditional principles of religion, of morality, and of the family without providing anything in their place has weakened society at its roots. Also, the growing ambition for social ascendency creates new needs, and makes necessities out of things not long since called luxuries. It has been shown that the number of births decrease in proportion as the family needs increase. This may be related to the increase of crime. The exodus to the cities causes detachment from home

and fireside, and frequently unclassing of individuals, tending to break family ties.

Then not only the increase of poverty, but the making the masses more conscious of their needs, by the increase of wealth, tends to general discontent. Thus some explanation may be given of the parallel increase of crime, wealth, and sterility.

There is also the increase of alcoholism, one of the main causes of crime.

LARGE FAMILIES FAVORABLE.

The reasons that cause fewer children are the same as those that lead to parental neglect in the rearing of children. One reason favoring large families is, that a father with little authority and morality, when he has seven or eight children, feels the necessity of supervision over them; but a strict father, with only one or two children, is liable to be too indulgent with them.

IDEA OF STRUGGLE FOR EXISTENCE UNFAVORABLE.

If, instead of the principles of traditional religion, as kindness, modesty, devotion, and sacrifice, social life is to be considered in accordance with modern tendencies as primarily a battle and struggle for existence, and that it is good that it is so; if the public should actually believe this, what an impulse it would give to crime, suicide, and insanity!

CITY LIFE UNFAVORABLE.[a]

The almost universal tendency to live in cities causes a decay of the country life. An English writer says of his own country that "The rush of life, the desire of wealth, the passion for exciting pleasures among the well-to-do, the high rents, the distance men have to travel to their work, the insecurity of that work, the daily labor of married women, and, perhaps, the greatest of all, the public house, all combine to make the happy homes of old England, so far as the poorer classes are concerned, a figure of speech and a poetical dream." This is, to some extent, true of the United States. Yet the old-fashioned home is the best place yet known for the training of a child. But such homes, owing to conditions beyond control, are growing fewer and fewer.

The great bulk of youthful offenders come from those homes where parental control and interest are lax or nonexistent. This is, perhaps, one of the main causes of the general increase of crime among the young.

PARENTS WHO GET RID OF THEIR CHILDREN.

Many persons desire to get rid of their children at the expense of the state. Some have connived at their children's evil ways, some have even placed money so that their children might take it and be brought into custody, thus ridding themselves of the care and expense of their offspring.

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[a] See "Man and Abnormal Man," pages 446, 453.

If such parents were compelled to have their children at home, could such a home be beneficial to any child? While no one is in favor of encouraging parents to place their children upon public charity, yet as the children are not to blame for having such parents, they should have first consideration.

AGES 12 TO 14 A CRITICAL TIME.

It has been found in France that, from 12 to 14, boys are most frequently sent to reformatories, and girls from 14 to 15 years of age. The ages of 12 for the boys and 14 for the girls are critical. This is the time when the children of the poor seek employment, escaping the control of the school, without coming back under the charge of the parents. At this age, also, passions begin to develop and youth becomes an easy prey to the temptations of the street. Thus the school is, in itself, a safeguard as long as the child attends it, but it also seems to indicate that the school is incapable of arming the pupil against the temptations of life when he has ceased to attend.

Pascal called the child a little impulsive being, who is pushed indifferently toward good or evil, according to the influences which surround him. Like soft clay, of whatever form, it can not resist the hand of the potter.

MOST CHILDREN CAN BE SAVED.

The great majority of children can be saved if taken in time. There are, however, a few naturally depraved and vicious children, many of whom come from debauched or drunken parents, presenting physical and mental stigmata, in epilepsy, imbecility, and insanity, who are called degenerates. Many of these are, doubtless, incorrigible.

DEFECTIVE PARENTAGE.

There are parents who are unworthy and others incapable or negligent. There are mothers and fathers, who, by their conduct or bad treatment, put their children in peril. These are mostly drunkards.

The family ties are weakened by death of both or one of the parents, by disease, and by poverty. Against these little or nothing can be done.

The movement of the people from the country to the city and the floating character of the population tend, with the loss of native ground, to lessen family sentiment. The unhealthy promiscuous conditions surrounding tenement houses, the insufficiency of woman's wages, the deplored condition of the young girl in the lower classes, cause a disintegration of the family life.

Then the numerous clubs, both women's and men's, mean so much time taken from the family life. The increase of divorces, of which the children are innocent victims, the second marriages, often inspired by egotism and selfishness—these make family life a mere name.

CHANGES IN FAMILY LIFE.

Formerly the father went to work alone and the mother remained at home to attend to her household duties and look after the training of the children. Now the wife goes out with her husband to

work, leaving the children at home alone or in the charge of other people. Formerly the father came home early from work and greeted his children, adding to the influence of the mother by firmness and kindness. Now the father may return late, or only to remain a short time, and then goes to the saloon, or to fulfill some so-called political duties.

SCHOOL CAN NOT SUPPLANT FAMILY LIFE.

It may be suggested that the school supply this want of family training for the young; but the school-teacher has too little time and opportunity to accomplish such a heroic task; and even if he should succeed to any extent, the results of his labor might be destroyed by the bad conditions surrounding such children out of school hours. To help the child withstand modern temptations there is more need than ever of right moral feeling, firmness of will, and moral resistance; such characteristics can not be produced by theoretical teaching alone.

EFFORTS OF THE STATE.

The State has been trying to do something through laws punishing the guilty—by reformatories, houses of refuge, industrial schools, juvenile courts, indeterminate sentence, etc.—but this is after the disease is discovered; the barn is locked after the horse is stolen. However much good the State has done, crime among the young is increasing proportionally faster than the population. One great need is methods directly preventive. While all the means now employed by the State doubtless tend to prevent crime, yet they are mainly indirect. The need is to modify as much as possible the conditions that lead to crime; to nullify the sources of the disease.

CRIME SHOULD BE ATTACKED AT ITS ROOTS.

Just as every State employs a health officer, not only to stop but to prevent disease, so the State should make provision for preventing crime by employment of the best methods known to science and sociology.[a] That is, instead of palliative measures, the causes of crime should be first sought out. Just as in cholera, once the dread of nations, the discovery of its cause has made it a rare disease, so in crime the investigation of its causes may result in lessening it greatly.

SHORT SENTENCES UNFAVORABLE.

A boy who may have lived in a dingy attic, or over a stable, or in a damp cellar, is suddenly placed in a comfortable, clean prison cell. While on many a day he had no sufficient meal, and often went to bed hungry, he now has regular meals. While daily he may have received brutal treatment, he is now considered humanely. The result is, when he leaves prison he may feel almost contented with such a life.

The moral effect is that a brief confinement takes away the fear of prison, which is always a strong factor in keeping the young from crime. This may be a reason why youthful criminals so easily fall back into crime.

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[a] See "Man and Abnormal Man," pages 15, 16.

INJURY OF PUBLICITY.

If the boy has a sense of honor, he will be greatly injured through the publication of his crime and punishment. Or the boy who, up to the present, was a nobody sees himself suddenly in the limelight, his name and photograph in the papers, long speeches made which concerned him only, his counsel's eloquence may have given him freedom from punishment with the applause of the public. All this flatters the boy; he feels he is more important and far superior to his former schoolmates or companions, among some of whom he may be a hero. Crime is not so bad, after all; prison is easy and rather interesting. This is somewhat the general impression left upon the young.

EDUCATION AND CRIME.[a]

Montesquieu said, "We receive three different or contrary kinds of education—one from our parents, another from our teachers, and another from the world." This is still true to-day. The family, if not bad, is often indifferent to the children's education. Some do not know how; others do not desire to try to correct the defects of their children. The trend of modern education seems to be to develop the mind rather than to form the character.

The education that tenement-house children receive from the world while playing in the streets tends to develop whatever is bad in their nature, though no doubt it sharpens their wits, producing a type of street urchin or slum child.

MORAL EDUCATION.[b]

A general defect in education seems to be giving too much weight to the intellectual and rationalistic side of nature, and too little to moral impulses. This boy stole because he was ignorant; no, he stole because of his bad social or parental surroundings, which are also the cause of his ignorance, he not having the means to obtain an education. Goethe says to liberalize the mind without giving one control of his character is bad.

While reform in education to establish moral character may do much in lessening crime, by making the young more able to resist temptation, yet it has its limits, especially if the press is allowed to publish broadcast matter that is injurious for youthful minds.

III. YOUNG CRIMINALS AND HEREDITY.

From a moral point of view there are two general classes of children: (1) Those who are timid, gentle, just, loyal, and good; (2) those who are hardened, turbulent, deceitful, vain, and wicked; they have bad intentions, they take pleasure in injuring others; they are irritable or without discipline, and unfortunately may have little intelligence. Education, religion, and fear of punishment have little influence upon them. But these children with such inward natures are not insane, nor imbeciles, nor idiots. Unfavorable surroundings develop their bad instincts. They love risks, play truant, beg, steal, commit arson, and sometimes do not hesitate to murder.

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[a] See "Man and Abnormal Man," pages 414, 419.
[b] See "Man and Abnormal Man," pages 416–418.

From these children come our young criminals who may be divided into three classes: First, criminals by adventure; second, criminals by nature, and, third, criminals who are mentally weak, though not insane.

CRIMINALS FROM ADVENTURE.

This class are specially inclined to seek freedom, having a desire to know, a curiosity, which through hearing or reading stories of adventure, causes them to leave home.

A boy, for instance, obtains enough money by theft to buy a ticket on the railroad. He arrives at his destination, but, curious enough, he experiences a feeling of isolation. Then fear comes upon him. He does not enjoy his escapade and hastens to return.

In other cases the motive may be lower, taking the form of desire for personal satisfaction. Then follow crimes where the desire is to appropriate something that has been coveted for some time. The resistance against solicitation becomes weak. Thus stealing begins in stores and bazaars, where it is so easy to reach little things. Isolated, tempted by what he sees, and with no immediate obstacle in view, the child yields to the impulse. The children who commit such crimes are not necessarily bad or perverse.

CRIMINALS BY NATURE.

This class of juvenile criminals manifest lack of moral feeling, impulsiveness, absence of remorse, and instinctive evil doing.

Some can almost be recognized at first sight. The first class shows repentance; the prison disconcerts and frightens them. But the second class have neither pride nor fear; they lie with audacity, attributing to others what they have done themselves. Some of them are chiefs of little bands, often well organized to steal. They have all the vices, which they avow with revolting cynicism. They seem also to have an instinctive appetite for alcoholic drinks.

A BAND OF YOUNG CRIMINALS.

A band of three attempted to steal jewels from a window. The chief was 10 years old; he had a brazen face; he was vigorous for his age. Under him was a comrade 12 years of age, rachitic, intelligent, but passive. There was another lad of 13 years. One of the band, who was assigned by the chief to rob the window, held it up with the left hand while with his right hand he took some rings. But the window was too heavy, so he let it drop. It broke, and they all fled on account of the noise. All were arrested. When the chief learned that one of the band had thrown the rings away in the street, owing to the haste, he could not refrain from reproaching his comrade for not having saved himself and kept the rings, which could have been sold.

This chief was a criminal by nature and habit. He was not wanting in intelligence, but he had no moral sense; he was an open enemy of society and its laws, which opposed his criminal appetites.

Some of these children live in a home where there is constant strife between the parents. From witnessing such brutal scenes, the main cause of which is alcoholism, they become brutal and violent themselves. Without supervision during the day, spending long hours in

the street; without any affection natural to a child, they begin to doubt that they have any duties; they are disposed to do what they have seen done, and the power of imitation becomes effective.

CRIMINALS WEAK MENTALLY.

The third class is composed of those who are mentally weak. These have all degrees of mental feebleness. Degenerates belong to this class. Before they commit crime they generally show excessive mobility of sentiments and ideas, an inequality of feelings, excitation, and then depression.

This class and the criminals by nature furnish most of the hereditary criminals.

CRIMINAL HEREDITY.

The first time a child is tempted to steal, there must be something in him to be tempted. That something is part of his nature and is hereditary.

This hereditary something or tendency can be increased by bad and decreased by good environment.

A child is a thief when this tendency to steal is too strong for him to resist in connection with the environment.

He is a thief by nature if this tendency is so strong that he can not resist it under ordinary circumstances—that is, in an environment where the great majority of children would be able to withstand temptation.

He is a thief by occasion if the environment be the real cause of his downfall. That is, if this tendency to steal and all forces in him resisting this tendency balance each other more or less, bad environment can easily cause him to fall.

The problem then reduces itself to the relation of three forces: (*a*) tendency to steal, (*b*) all in the child's nature that resists this tendency, and (*c*) environment, mental, moral, and physical.

In almost all children force *b* doubtless exceeds force *a*, otherwise there would be many more juvenile criminals, for there are a large number of children in environment that tempts them to steal. Force *a* has more of the hereditary element in it than force *b*, because there are many forces, as fear of police or punishment, which have increased force *b*. In fact, much of force *b* may have come originally from the environment.

LAW OF HEREDITY.

The law of heredity may be said to be more qualitative than quantitative—that is to say, the results of heredity may come from paternal, maternal, racial, and acquired qualities. But the law does not tell us how much comes from the father or how much from the mother, or race, etc.

In the great majority of cases the results assumed to be hereditary are mostly due to unconscious imitation of those near the child from day to day. If both parents are very bad, the spectacle and example of those whom the child knows and loves may leave impressions as ineffaceable as if inherited. To tell, then, in the case of a child under such conditions what bad tendencies or stigmata are inherited and what come from the environment is a most difficult problem.

Many sons of criminals become honest men, and too frequently sons of honest men become criminals.

CASES ILLUSTRATING POWER OF ENVIRONMENT.

A father committed a brutal murder; the son became a model young man.

In a family of brigands the son was taken to other surroundings and grew up to be an honest laboring man.

The father was a thief and a camorrist. The elder son, who always lived with him, was like his father. The second son, who at the age of 3 was taken to another city, became an exemplary young man.

It is well known that in families with diseases of a neurotic hereditary nature the sons who are separated from their families in early life are less affected than those who remain at home.

HEREDITARY CASES.

Girl murderer, 2½ years of age: The parents were Italians; the father worked in a factory; there were three children, the eldest a girl 7 years of age, the second a girl 2½ years, and a little baby boy 6 months of age. In the morning the mother went out to work; the father slept at home in the daytime, as he worked nights.

The eldest daughter was taking care of her little sister; she had just got up and was not yet dressed, when she discovered that her sister had urinated on the floor; she reprimanded her and said she would tell her mother when she came home. Under the fear of this threat the little sister, 2½ years old, seized a long butcher knife on the table, and while her older sister was bent over she approached her, and with all her force cut her in the lower lateral right side of her thorax. Then she quietly replaced the knife on the table. The wound measured 3 centimeters in length.

Measurements of the child assassin were: Height, 80.5 cm.; arm reach, 76.5 cm.; maximum length of head, 165 mm.; maximum width, 155 mm.; transverse diameter, 130 mm.; cephalic index, 78; horizontal circumference of head, 484 mm.; vertical circumference of head, 310 mm.; frontal diameter, 118 mm.; height of face, 100 mm.; ear—length, 44 mm.

There was no plagiocephaly nor facial asymmetry. The forehead was prominent; the frontal bosses especially so; the ears were also prominent, the thickness of the lobes was more than the average; teeth were good and regularly implanted. There was nothing abnormal in the hands.

The child was fairly well developed for its age and showed no trace of rickets. It was born at term, but in a state of asphyxiation. The child was nursed by its mother for two months, then was sent away from its parents fourteen months. It never had convulsions; it slept very poorly. It was extremely violent, and was subject to frequent spells of anger, but it never cried. After the crime it manifested no emotion, nor regret; it never displayed any cruelty to animals. The mother was violent, but had no nervous disease; the father was of a quiet disposition, never becoming angry.

The child had a grave and serious face and a sad expression. While being measured it did not manifest the least emotion.

MURDERER AND THIEF BY NATURE.

An intelligent young criminal, an adolescent, son of an alcoholic, attempted to assassinate his benefactor in order to obtain a few dollars. In prison he manifested a most complete cynicism; he did not wish to be considered a common, timid, or repentant criminal; he admitted he wished to be one of the celebrated malefactors. Speaking of his using absinthe to excess, he said he imitated the principal defect of his father, who drank absinthe. His ideals were, in a word, to kill, steal, and massacre. At another time he said "Now, I am detained in order to go before the court; there will be many persons there, and the newspapers will talk about me."

POISONING AND INCENDIARISM.

This young boy was 15 years of age; employed as an apprentice in a provision store. In the six months he was at this store he committed the following crimes:

On June 20 he put sulphuric acid in his employer's coffee cup, but by accident nothing happened.

In the same month he threw a piece of burning sponge under the stairs, but nothing caught fire.

On July 5, at 5 o'clock in the morning, in getting up, he threw a burning match under the chair upon which hung the dressing gown of his employer; it took fire.

In the middle of the same month he poured sulphuric acid into a bowl and sold it to a woman. He denied at first his attempts to set fire, but admitted the attempt at poisoning, saying that he had no bad intentions against the person or the fortune of his employer, who also said that their relations were most friendly, and he could not explain the boy's conduct. The boy said he had an irresistible desire to do evil; but it was claimed that the police were the cause of his making this excuse. His former teacher and comrades said nothing unfavorable of his character. His father said he was endowed with good sentiments, but was like a child, playing with little children younger than his sister, who was 5 years old.

He was a well-developed boy; his head leaned forward; his face gave the impression of simpleness.

BOY 10 YEARS OF AGE ATTEMPTING MURDER.

This boy was playing on the stairs in the house; a little girl neighbor was sitting on one of the steps and was in the way of the boy, who told her to go away. But the little girl, 3 years old, did not get out of the boy's way. He struck her; she cried; he took her by the neck, half choking her, she falling down upon her back. He was afraid; he dragged her to the closet at the head of the stairs and shut her up and then ran away. She was partially suffocated. She was found crying in the closet. When arrested the boy admitted the facts; he had no excuses, but said: "She cried too hard, so I shut her up."

His mother had lost two children who had epileptic convulsions; she herself had hemiplegia on the right; also had aphasia. The father was not well balanced, having most exaggerated literary pretensions. For three months this boy had chorea; he was intelligent,

learning to read and write easily; he also drew patterns and designs. Some of these were of most terrible character, indicating violent death.

BOY MURDERER AT 13 AND 19 YEARS OF AGE.

He assassinated a boy 9 years old. When answering questions by the court he was in tears frequently. He was robbing birds' nests in company with his little comrade, after which they sat upon the ground. He began to whittle little sticks with his comrade's knife. His comrade became vexed, hit him on the back with a small stick, and called him a pig. This made the elder boy angry and he struck the younger boy with the knife in the neck, causing him to be stupefied, but stammering out something which the assassin did not understand. He then stabbed him in the neck a second time, killing him. Then he threw the knife far away and also the hat of his victim and hastened to the father of the boy, saying that he and his son had been pursued by an enraged man and that he had with great difficulty been able to escape. The father, dismayed, accepted the story of the young assassin, who led him first in a different direction and then brought him to the scene of the crime. The boy was at first not suspected. When confronted with the body of his victim he appeared callous and kept whistling.

There were certain extenuating circumstances for the assassin. He had been an orphan since 2 years of age. His parents, though respectable, were gruff in their treatment of him. He was brought up by the second wife of his father, who spoilt him by being too easy with him.

He was sentenced to seven years' imprisonment. After serving his time, his brother took him into his home with a view of helping him.

His brother's wife, a young woman 27 years of age, was found dead in the house; her throat was cut in several places. Suspicion fell upon the brother of her husband, now 19 years of age. For six months this young murderer was observed carefully by two medical experts, who concluded that he was in a slight degree a degenerate, but not at all insane or imbecile.

When brought before the court he said very coolly that an indomitable desire to kill had pursued him since childhood. He had struggled against this, but without success. Being alone with his brother's wife, the desire to kill her arose; he could not resist it, he said. "I regret it, but thou shouldst die," and seizing the young woman he cut her with his shoemaker's knife several times in the throat. These wounds were of the same character as those he inflicted upon his little comrade; that is, exactly as cattle are killed in slaughterhouses. After this murder he very coolly made preparations for a voyage, and in half an hour he left the house, going directly to the station and traveled about continually for several days, then he returned to the city and made himself known to the police, as he had done in his previous murder.

He was condemned to imprisonment for life, receiving his sentence with the most indifferent coolness.

He had worked at the butcher's trade in early youth.

BOY WITH HEREDITARY TAINT.

The boy was 11 years old; his father was a nervous person, violent, a drinker and gambler; his mother was extremely nervous, becoming exceedingly angry on the least provocation.

He was an apt pupil, when so disposed. But he was lazy, greedy, untruthful, and jealous; he played truant at school continually, declaring he had had enough of school. For two months he went out every evening attending balls and other entertainments, not returning until after 11 o'clock. In the day he did not wish to do anything; he was always away. It appears that his father, when a boy, had the habit of sleeping outside. The son had little affection for his mother; he did not wish to kiss her, nor have her kiss him. Brutal and treacherous, he would strike his sister, 14 years of age, defective in many ways and as bad as her brother. He would abuse everyone and become violently angry, threatening to break everything. Every effort was made to help this child; nothing could be done.

PHYSICIAL DEFECTS IN 65 YOUNG CRIMINALS.

	Number.	Per cent.		Number.	Per cent.
CRANIUM.			CRANIUM—continued.		
Asymmetry:			Eye—Continued.		
On left side	12	18.46	Iris black	9	13.83
On right side	24	36.92	Iris green	9	13.83
Macrocephaly	7	10.77	Iris maroon	22	33.84
Microcephaly	5	7.69	Iris blue	13	20.00
Scaphocephaly	2	3.07	Iris gray	9	13.83
Acrocephaly	6	9.23	Iris pigmented spots	13	20.00
Plagiocephaly	12	18.46	Pupils unequal	2	3.27
Cymbocephaly	5	7.69	Orbits far apart	5	7.57
Head:			Mouth:		
Very large	4	6.15	Lips turned up	16	24.6
Oval	13	20.00	Lips thin	10	15.88
Round	7	10.77	Lips thick	23	35.38
Flat	5	7.69	Lips opened	21	32.30
Pointed	2	3.07	Lips prognathous	15	22.07
Sugar-loafed	6	9.23	Teeth large	16	24.61
Brachycephaly	49	75.38	Teeth badly implanted	17	26.65
Mesocephaly	13	20.00	Precocity of wisdom teeth	11	16.92
Forehead:			Teeth wide apart	10	15.38
Receding	6	9.23	Teeth badly decayed	10	15.38
Low	3	4.61	Palate low and large	5	7.69
Narrow	7	10.77	Palate high	8	10.77
Bosses:			Palate pointed vault	31	47.69
Projecting	35	58.84	Nose:		
Very prominent	1	1.54	Large	12	18.46
Superciliary arches prominent	17	26.15	Short	6	9.23
Parietal region:			Long	4	6.14
Fontanelles	4	6.15	Straight	20	30.75
Flat	15	23.07	Aquiline	11	16.92
Bregma depressed or sensible	10	15.38	Snub	15	23.07
Temporal region	26	40.00	Root very much depressed	14	21.53
Lambdoid suture depressed, mastoid processes prominent	32	49.22	Division wall thick	6	9.23
Occipital protuberances large	24	36.92	Orifices anterior-posterior	12	13.46
Face:			Base of, horizontal	4	6.16
Asymmetry	22	33.86	Base of, raised	18	27.66
Round	8	12.30	Ears:		
Long	4	6.15	Large	7	10.77
Triangular	4	6.15	Small	5	7.69
Zygoma prominent	34	52.31	Thick	13	20
Upper jaw prognathous	43	66.15	Concave	8	13.20
Lower jaw large	22	33.84	Asymmetrical	19	29.23
Eye:			Outjutting	42	64.61
Eyebrows thick	18	27.66	Helix, rudimentary or absent	22	33.84
Eyebrows light brown	11	16.92	Helix, badly formed	19	29.23
Eyebrows dark brown	44	67.69	Helix, tubercle of Darwin	6	9.23
Eyebrows black	10	15.38	Helix, Wildermuth	14	21.53
Eyelids many folds	6	9.23	Antihelix badly formed	5	7.69
			Tragus bilobular	24	36.92

PHYSICAL DEFECTS IN 65 YOUNG CRIMINALS—continued.

	Number.	Per cent.		Number.	Per cent.
CRANIUM—continued.			PHYSICAL SIGNS OF DEGENERACY—continued.		
Ears—Continued.					
Tragus conical	15	23.07	Forehead very receding	6	9.23
Antitragus voluminous	14	21.53	Scaphocephaly	2	3.07
Lobes small	14	21.53	Asymmetry	35	55.07
Lobes adherent	47	65.07	Hydrocephaly	2	3.07
Thorax large	9	13.83	Rickets	3	4.61
Body:			Face, asymmetry	22	33.84
Small for age	2	3.07	Vault of palate narrow and deep	8	12.30
Large for age	5	7.69	Vault of palate pointed	31	47.75
Slim	9	13.83	Division wall of nose divided	17	26.15
Well developed	7	10.77	Prominent zygoma	34	52.31
Feet:			Prominent cheek bones	34	52.31
Large	2	3.07	Prominent superciliary arches	17	26.15
Flat	9	13.33	Orbital cavities wide apart	6	9.23
Arm reach greater than height	49	75.38	Prognathism superior	44	67.68
Fingers:			Prognathism inferior	8	12.50
Very long	1	1.54	Prognathism double	6	9.23
Very crooked	2	3.07	Lower jaw much developed	22	33.84
Hands thin and long	4	6.15	Flat feet	9	13.23
Skin:			Amblyopia	5	7.69
Very white	20	30.76	Iris irregularly pigmented	13	20
Dark	18	27.66	Strabism	6	9.23
Defective	6	9.23	Nystagmus	5	7.69
Hair:			Asymmetry of ears	19	29.23
Light brown or red	11	16.92	Outjutting ears	42	64.61
Dark brown or black	13	20	Helix deformed	19	29.23
Scarcity	5	7.69	Ear lobe adherent	47	65.07
Beard lighter than the hair	4	6.14	Small lobe or no lobe	14	21.53
PHYSICAL SIGNS OF DEGENERACY.			Prognathism of lips	15	22.07
Cranium:			Teeth:		
Microcephaly	5	7.69	Badly implanted	17	26.65
Macrocephaly	7	10.70	Too large	17	26.15
			Badly decayed	10	15.38

IV.—YOUNG MURDERERS BY NATURE.[a]

ASSASSINATION THROUGH LOW DESIRE.[b]

Case 1.—J. L.; 16 years old. While his father was in the hospital, he had been given lodgings and cared for by P., a workingman, who lived with a woman by whom he had had two children. Otherwise P. was a trustworthy man. J. L. attempted to assassinate the woman, without any provocation or grievance; he admitted his purpose was violation. He had taken part in dressing an abscess of the breast, and this had made him desire to possess the woman; but knowing that she would not consent, he had the idea of cutting her throat. But when he saw the blood flow he was satisfied to take her purse containing a dollar or two. He was condemned to hard labor for life. One year previous he had been arrested for theft.

The father of J. L. was addicted to drinking. The mother had died from chagrin and privation. The father was a man quick, hasty, and intemperate, but honest and intelligent. The mother was gentle in character. Of her six children, the oldest was an excellent son; the second born was convicted of setting fire to his employer's store, but he had been treated brutally by his employer. There was no trace of insanity in the family. J. L. had no physical anomaly worthy of notice. But he was of a sneaking character, irascible and bad, yet he had intelligence, without being studious, and a certain intellectual taste, but always for reading bloody deeds of great criminals. He

[a] See "Man and abnormal man," pages 491, 493.

[b] Joly, Henri, Jeuns, Criminels Parisiens, Archives d. Anthropologie criminelle, 1890.

was little disposed to work, preferring to drink, smoke, and amuse himself; a case of crime pure and simple; no insanity, no sudden impulse, no remorse; a cynical boasting and a strange pride in being an object of interest in the court.

As soon as he had a little money he would try to have a good time, roam around, associate with little toughs, and drink absinthe; premature liberty, irregular work, erratic life on the streets, evil companions, all these combined at the same time to ruin him.

He loved his mother a little when a child and listened to her some. But after her death he began to remain away from home, and often went to his uncle. After his uncle went away he soon left his father, returning only when in great need, and frequenting naturally the worst sort of places. When J. L. was reproached by his father for his laziness and bad conduct, he answered, "He who works is foolish."

Case 2.—A servant sentenced to fifteen years' confinement in prison. Previous to this he had served three days in jail for theft. On the 9th of February he formed the intention to murder his fellow-servant and appropriate his new clothes and watch. On the following day he took an ax into the stable, where he and his comrade slept, and hid it there for use on the following night. About 10 o'clock in the evening they both went to bed, his comrade having on a shirt and drawers, but the murderer removed only his coat and boots. After both had talked awhile and his comrade had fallen asleep the murderer slipped out of the bed, procured the ax, and struck his comrade on the head, and as he cried out he struck him several times, then threw the ax down, grasped him by the throat with his right hand, and held him a while to make sure he was dead; then threw the body off the bed and cut the head off. He took his comrade's watch. After a while he went to another person, awoke him with a pitiful sound, and, weeping, told him that he and his comrade were in a tavern, and that after he had returned to the stable he found him upon the ground dead.

Later he confessed, showing no repentance and manifesting complete indifference.

He was 17 years of age; had attended a country school; his education was very defective. His father was a laborer and hard drinker, of roving disposition, not troubling himself about his children, so that his son was obliged to go out to work very early in life.

At the time of his crime he had lived poorly, being emaciated and pale. He was stupid and very limited in intelligence. He pretended to be repentant so that he might receive as good treatment from the officials as possible.

He was 152 cm. in height, slender, a blond, symmetrical head, the forehead high and broad; lower jaw standing out very prominently; his look was agreeable and meek. Later he showed deep repentance; had many sleepless nights, and wept much on account of his crime. After two years and six months' imprisonment he died of consumption.

Case 3.—K the son of a proprietor in a little country village. He was 16 years of age. He said his parents lived with his aunt; that they quarreled much; that they had an altercation in front of the house on the street. "I heard my mother cry for help; I ran out to her at once, and saw that my mother had been knocked down; this made me so furious that I went after our gun loaded with buckshot and shot my aunt; alas, she fell to the ground and died."

But the evidence showed that for a long time K had acted hatefully and maliciously toward his aunt. Often he had said: "I will blot her out." His aunt went at noon to her daughter's with a pail of milk. K saw her and resolved to shoot her on her return. With loaded gun he watched for her, standing at the street door, and shot her down as she came by him. Up to the last moment he denied premeditation. He never showed the least sign of repentance for his crime.

K was healthy, strong, and well developed. There was no trace of insanity in his family. He had a limited schooling; had little intelligence, but a good memory. He was reserved and surly; talked little, very slow, and in a monotone, sometimes with a nasal sound. His sulky disposition continued. Later he seemed more cheerful; his laugh was unusually short and unpleasant. In a fit of anger and discontentedness he twisted the neck of a canary bird off which, as a favor, had been left in his cell. He manifested neither sorrow nor regret.

His outward nature corresponded to his bizarre, dull, and coarse inward character. He had a very broad head, a small, somewhat receding, but relatively high forehead; eyebrows scanty, eyebrow region arched; upper eyelid drooping down; back of head flat; ears large, standing out; zygoma prominent and broad, distant from one another; chin small and pointed; hair thin, light brown.

Frequently in his prison life it was necessary to discipline him. He was neglectful, sometimes insolent, of violent temper, and malicious. His mental condition grew worse, he becoming suspicious, apathetic, refusing food. Finally came into a demented, paranoic condition.

BOY MURDERER AND DEGENERATE WITH PERVERTED HABITS.

Case 4.—This boy (12 years of age) had been kept out of school frequently by his parents to help them at home. His father gave him a written excuse to take to his teacher, saying that he had been sick, which was not true. Moreover, his schoolmates had seen him on the street, and his teacher would hardly believe the excuse, so that the idea of going with this false excuse back to school was painful; so that instead of returning to school he walked around aimlessly in the streets of the city, meeting a little boy playing, by name Albert, who was the son of a ship machinist. The little boy with his long locks pleased him. He planned to have unnatural practices with the boy, promising to take him to the Christmas market place and the hippodrome, and other amusements. The boy could not longer resist these promises, and went with him. Coming first to a bridge in the harbor, the boy complained of sore feet; so they both rested in one of the water pavilions. He subsequently confessed that after having unnatural practices he feared that the child would tell its mother and that people had seen him with the child, and that if he returned home with him he would have to pass a man's house who knew him well. When they were on the steps leading to the brink of the river, it came over him suddenly to shove him into the water, which he did, and leaving him struggling, he went away. He was convicted and sentenced to prison for eight years.

He was 137 cm. in height, circumference of chest 71/76 cm., and waist circumference 63 cm.; he was small of stature; strong and symmetrically built, and sexually not yet developed. His parents were

Hebrews; his father was a bookbinder, with a very small salary. He also received some help from a society. The boy had one older and two younger sisters.

There was an hereditary taint in the family. A 10-year-old son of his father's brother was restless, impulsive, and with undeveloped moral sense. On the mother's side were three cases of insanity—in a brother and sister of her father and one of her sister's children. Though he was kept out of school a great deal, he was industrious when at school.

His mother sent him five or six times weekly to sell things in disreputable houses, where unnatural practices were common. It was usually in the night he was sent to such places, when men were there, and naturally the next day he was unable to go to school. Doubtless he had learned these practices in this way, as he himself admitted. He showed no regret for his crime.

A MURDERER BY NATURE.

Case 5.—A boy 14 years of age. He alone, or in company with others, had assassinated an old lithographer, who was a low character. He killed him with a stick of wood and took a small sum of money from him. The boy was shrewd enough to escape justice by false testimony. He attempted to kill a witness in the presence of the judge. He had been convicted several times for theft. He suffered the death penalty at 19 years of age. He killed his mistress to keep her from divulging the secret of his assassination of another.

He was tall and slender and vigorous in constitution. His home surroundings were good. "You had education, training, good examples, all," said the judge. "It is true," he answered. He studied at college, then at a special commercial school. He was given a position in one of the largest commercial houses, where he inspired the greatest confidence. He was sent out to found a branch establishment. Here he met an unfortunate acquaintance; then came races, gambling, women, dissipation, and crime.

He said of his mistress that she was the only one who did not desert him in prison; yet he murdered her on account of jealousy.

When he first met the executioner, after being sentenced to death, he was very cordial, saying: "I know you well, sir. I have seen you come to the guillotine. Be tranquil. You will have no trouble with me." At the moment of execution he said, with a certain gentleness, "Give my love to my parents."

V.—LITTLE GIRL ASSASSINS.

Case 1.—Theresa, 12 years of age, kills a little boy 2 years old. Her father was an Arab, her mother a Spaniard. The father was a good workman, healthy in body and mind. He was accustomed to drink wine at meals and a little absinth mixed with water during the heat of summer, but he was not an alcoholic. He was brutal and often struck his daughter, but not without cause; he never deprived her of food. Theresa had a brother Réné three years younger. The mother was a good woman; she died when Theresa was 9 and Réné 6. After her death the children were neglected, the father being away at work all day, and too fatigued at night to give attention to his children. Theresa took care of the house, but did it very poorly. If she did

not receive the care and caresses of her father, she often was slapped by him, for neglecting to prepare the evening meal, and for other bad faults. She grew worse, when her father slapped her she would take vengeance upon her brother by striking him. But he soon became strong enough to defend himself. Theresa began to steal; she took from the bureau of one of her mother's relatives 200 francs; but fearing she was suspected she threw the money back into the room of the person to whom it belonged. At another time she took some clothes from a clothesline, which were never found. She was especially dishonest in buying provisions for her father. Complaints also of small thefts were made by the neighbors.

One of the child's faults was extreme vindictiveness. When punished by her father, she would sometimes leave, and remain outdoors several days and nights, or at the neighbors, who could not prevail upon her to return home; once when punished she sought means to poison her father. Later she said, when her father punished her, she became confused and did not know what she did.

Her character was bad notwithstanding her age. Pretending to go to see her father, she went to the room of an Italian workman with whom she had improper relations. The father moved with his family onto a farm in another neighborhood, where Theresa found a real friend who was second mother to her, Madam G, whom Theresa said treated her well in every way, helping her in her household duties, and giving her many little things. Madam G had a little daughter two and one-half years old, who used to follow the children about the farm. Réné said that Theresa had tried several times to drown this little girl in the trough for watering the horses, but the frequent passing of the workmen had prevented her; that she told him several times that she wanted to drown the child.

One morning Theresa and her brother went out with the little child of Madam G. Theresa, in passing the horse trough, told her brother she was going to throw the child in and drown her, but the passing of some workmen prevented her. Then, leading the child by the hand, with her brother following, she came to a covered reservoir of masonry used for distilling purposes, with an opening covered by a trapdoor. Theresa climbed up on a wagon at the side of the reservoir and then lifted the little child up. Her brother remained back of the wagon in fright, because his sister told him she was going to drown the little girl. Then she passed from the wagon to the top of the reservoir with the child. Removing the cover, she took the child under the arms and, holding her over the opening, let her fall into the water, heated almost to the boiling point. The child uttered two faint cries and disappeared. Theresa put the cover back over the opening and, stepping in the wagon, descended to the ground. She threatened her brother with like treatment, or with cutting his throat, if he said anything; she repeated these threats.

In answer to questions, Theresa said: "I know I did it. I threw her into the basin of warm water, knowing that she would die at once. The idea of killing her came to me a few minutes before when we started out, on seeing her follow me. Neither she nor her mother ever did anything wrong to me. I used to play with them and love them. I don't know how the idea of killing came to me. Sometimes I do not know what I do, as when my father strikes me."

When asked if she did not intend to draw her out immediately, she answered, "No; I said I would kill her."

Theresa showed neither remorse, emotion, nor fear. She did not hide from or avoid seeing the parents, whose house she passed on her return. The mother relates of Theresa that when she asked her what she had done with her child, she answered: "What do you suppose I have done," and with a vague gesture, she said: "The child is there where I left it." A moment later she said it had gone with Mrs. C. in her carriage. Theresa helped Madam G. to hunt for her child, telling her that she was with the workmen under the trees. When they came near the reservoir, Theresa, being questioned, said: "Are you crazy. We went to the bean stalks and we returned, and I left your child at your house. If anything had happened to her I would have told you." When Mr. G., the father of the child, returned from work in the evening, he brought three cakes, one for his child and two for Theresa and her brother. Theresa when taking the cakes, held them up before the weeping parents, saying: "Poor Etienne will not eat the cakes. Who knows where she is?" About 8 o'clock in the evening Theresa advised the mother to burn incense and candles over the tomb of a priest near by, which the mother did. Theresa's brother finally told where the child was. When Theresa was questioned by the policeman she confessed the crime and whenever asked as to her motive would invariably answer: "It was an idea that came into my head."

The specialist who examined Theresa said she was very intelligent for her age, with a clear idea of responsibility for her acts.

Theresa declared that no one had suggested the crime to her.

Theresa was small for her age, but physically symmetrical; her eyes were black, bright, and intelligent, showing no trace of disease; she was simple in appearance and gracious in manner; her mind was clear, there was no trace of insanity, epilepsy, or hysteria.

Theresa loved the Italian workman, with whom she had improper relations; she spoke of violation, but she never complained to anyone. This Italian had a quarrel with Mrs. G. over money matters, and left the farm. Most children would have cried and made a scene.

Theresa concealed her anger; her ideas of vengeance against her father should be noted, and it will be understood how the same sentiments would be developed with still greater intensity for the wound in her heart from loving her Italian friend; she must avenge, by destroying the most cherished child of the enemies of her friend. The motive of her crime was vengeance. Her education was left to chance; she had no proper home training.

Theresa was sentenced to seven years' confinement in a house of correction.

Case 2.—Blanch, 13 years of age, living with her mother, her father being unknown. Her mother was living with a man who adopted the girl as his legitimate child. But this union did not last long, for the husband obtained a divorce on account of the conduct of his wife, she afterwards living in concubinage with another man, a weaver by trade.

Blanch, after spending several years in a religious school, was, at 11 years of age, sent out as a domestic and served as such in several families. After eighteen months of domestic service she went to work in a spinning mill. Here she found a companion about her own age, with whom she lived, by the name of Philomene. Philomene was

smaller, more frail, and more timid than Blanch; she soon became absolutely under the sway of Blanch.

Blanch, greedy by nature, spent her pay at a café for oil, sugar, and coffee, instead of taking her salary to her mother as she should. To make up for this loss she stole Philomene's pocketbook. The theft being discovered, the lady overseer at the mill caused the pocketbook to be returned to Philomene in such a way as not to offend Blanch, who nevertheless did not seem to have learned anything from this lesson. For a day or two later she formed a monstrous idea in her mind.

The hands leave the mill Saturday at noon, going in groups to the surrounding villages, some riding in carriages. To accomplish her purpose it was necessary that she be alone with Philomene on the public road. So they both went to the lady overseer and asked her if they could leave at eight in the morning. Blanch did the talking, and after some insistence obtained the permission.

Being both alone on the highway, Blanch, in order to steal the pocketbook of her companion Philomene, stopped at a small village and took Philomene to several cafés and had her drink alcohol with coffee in order to get her intoxicated. They continued on the road, and at two different times Blanch got Philomene's pocketbook, but Philomene succeeded in getting it back. The second time Philomene said: "You have stolen my pocketbook; I will tell your mother you are a little thief." This threat was probably the occasion of the crime, the idea being to rid herself of Philomene, her possible accuser.

The two girls reached a little river over which there was a bridge without protecting rails. Blanch had not yet succeeded in getting the coveted pocketbook of Philomene.

Blanch now made the third and last attempt to take her comrade's pocketbook, and in order to get rid of Philomene as a witness against her, she pushed her into a creek. The bridge was about 5 feet high. The victim laid upon her stomach in the bed of the creek, with blood upon her face, yet not seriously hurt. Seeing her raise her head, Blanch crossed the bridge and went down to the creek to reach her victim; then in a terrible rage she held her victim's head under water in order to drown her, the water being quite shallow. The victim tried to raise herself; with this, Blanch struck her head against the earth, plunging her head twelve times, until finally she was asphyxiated. To make sure of her victim's death, she struck her head five times with a heavy stone. Then she calmly went away, but instead of going to her own people she returned to the parents of the victim. After being received, her clothes being wet, she explained that she had fallen into a canal. The parents of the victim had her shoes and stockings changed, looking after her comfort in every way, giving her a glass of wine. All these kindnesses produced no sign of remorse or regret. She said she had left Philomene in the village, exclaiming at two different times, "Has she not come yet?" She acted so naturally as not to create any suspicion. She left the house quietly and returned to her mother and gave her the 5 francs stolen from her victim. She threw the pocketbook into a field near the place of the crime.

When arrested, and after denying everything, she began to make partial confessions, but she was always calm, cold, and surprisingly cynical.

The probable causes of this crime are (1) greediness; (2) need of money in order to avoid the reproaches of her mother; (3) idea of

assassination, arising from a desire to do away with Philomene, who had denounced her as thief, and (4) the remembrance of assassination in the same place fifteen months previous to her crime. A little girl had been violated and assassinated, the author of the crime never having been discovered.

Blanch had brutal instincts, belonging to a primitive and barbarous nature. The surroundings of her childhood were also bad; her father was unknown; her mother married later. She sees her mother's husband obtain a divorce against her mother on statutory grounds. After this her mother lives in concubinage with another man. The general surroundings of Blanch were low in moral tone as revealed by the fact that her mother and the parents of the victim had made a contract to drop all civil action for a consideration of $7 worth of wheat and $10 in money.

Some measurements of Blanch, furnished by the prison authorities, are: Height, 1.40 meters; arm reach, 1.36 meters; length of head, 163 millimeters; width, 148 millimeters; length of right ear, 56 millimeters; width, 31 millimeters; left foot, 22.5; medius (left), 96; little finger (left), 72, and elbow (left), 361 millimeters. Eyes, dark brown; hair, dark brown; forehead, medium in height and width; inclination, straight; nose, root medium; back, concave; base, raised; nose, short and prominent; chin, round; face, round; complexion, dark; mouth, medium in size; eyebrows, brown; a little scar in the middle of the left cheek; a little freckle on the left side of the neck.

When visited a month later in prison, where she was sentenced for ten years, she seemed very patient and contented. She spent much of her time in reading. She said she regretted her crime; that she had no idea of killing her comrade until she reached the bridge. She wrote her mother to take good care of the house, as it would belong to her later. Avarice permeated her character.

VI.—CASES OF GIRL INCENDIARIES.

It is sometimes said that children set fire to houses and that often it is impossible to discover a reasonable motive. Some children say that they are seized with a violent desire to see the fire which they can not resist; sometimes a voice tells them to set fire; others admit that they set fire because it is a pleasure. But this crime is comparatively rare, but the motives are often vengeance or jealousy for the employer or for the family to return home. It is easy to commit incendiary acts without being discovered.

Case 1.—A servant on a farm, 15 years of age, set fire to the house of her employer on the 11th and 13th of November, as she herself avowed, giving as a reason that she felt herself pushed by an irresistible force. Later she gave as a motive that she thus hoped to cease her service. Casper[a] points out in this case that the judge assuming it to be a case of pyromania had by his questions suggested or drawn out such answers as supported the supposition.

Previous to entering this service the girl was joyful and talkative, but after entering it she became silent and lazy. She also had a lover with whom she had improper relations. She was not a pyromaniac, but responsible for her acts.

Case 2.—She confessed to the police who arrested her that she had started a fire at her employer's house. At first she denied this, say-

[a] Casper, J. L. Médecíne légale.

ing that the fire was accidental. About fifteen days later she said: "In the evening I was working in the kitchen, when the idea came to me to set fire to the shed of my employer, and without reflecting that a fire could cause much damage, and without knowing what I did, I took a match and, finding a glass in the window broken, I set fire to the dry branches of dead trees within; the fire began immediately and I ran into the house."

The girl was large and vigorous for her age. She held her head down, looking to the ground or one side, and never at face of the one talking, in such a way as to indicate a certain timidity and simpleness. She answered insignificant questions with vivacity, but when the question concerned her crime she had fear and became embarrassed; it seemed impossible to draw from her the motive of her act. She refused to admit what she had admitted to the police, that it was vengeance toward her employer. This was singular, as she claimed to have many reasons for this; that she was maltreated, having little to eat and much work to do; that she was struck and injured, and for this reason she had tried to run away, but she had been prevented. Three weeks before her crime she desired to leave, but she was refused and beaten. This was enough to cause in her vengeance. Yet she refused arbitrarily to admit vengeance. Her mistress said that she never did her work thoroughly; that she never saw in her any trace of melancholy or mental peculiarity.

Case 4.—A young girl, 15 years old, of a very good family, but with hereditary mental taint, was arrested for incendiarism. At menstrual periods an incendiary obsession suddenly arose.

Three fires occurred one day after another in the house of a widow who kept a grocery, causing little damage, yet very mysterious in origin.

Suspicion was directed toward a girl servant, her confidence was gained, and she said: "On Monday, May 2, after returning from a funeral I took a match into the kitchen with the intention of making a fire. After undressing, I went into a room where I set fire to some carpet brushes resting upon bags, then I went downstairs to clean the skirt of my patron. In about a half an hour, on going up again with the garment, I noticed that the house was filled with smoke and informed madame of it. On the 4th of May, about 10 in the morning, I took a match which was on the table in madame's room and went into her son's room and set fire to a newspaper upon the bookcase. Then I shut the door and went down to clean the store. About 5 o'clock in the evening, being alone at work in the yard, I took a match from the box on the table in the kitchen and went up to the granary and set fire to the brooms there. When I saw the flames arise, I shut the door and went down to continue my work. In about a half an hour I saw the smoke coming from the roof and said there must be a fire in the granary."

There was no reason whatever for this servant to set fire to the house of her mistress, with whom she had been only five days. When she was asked to explain her actions, she replied: "Something of an extraordinary nature made me set fire." The absence of any hatred or vengeance and this passion to commit such criminal acts caused the judge to have a special examination made of the case.[a]

[a] Examen Médico-Légale d'une jeune incendiaire, Bull. Soc. Méd. de L'Yonne, 1904.

The hereditary antecedents were as follows: On the paternal side the grandfather died at 66 of pulmonary tuberculosis; he was sober, but of violent character with excessive anger spells. The grandmother died at 68; she had good health. A first cousin was bizarre, having run away from home at 14. The father had little intelligence, but a good character.

On the mother's side the grandfather died at 58 of bladder disease; he was a sober man; the grandmother committed suicide at 62. The mother was very nervous, emotional, easily discouraged, being attacked with coxalgia.

The hereditary taint was greatest on the mother's side. The child had three sisters, ages 9 years, 6 years, and 8 months, all having good health, except the second one, who had convulsions.

The girl incendiary was born when her father was 20 and her mother 18 years of age; she began to walk at 13 months, to talk at 15 months; she had measles when 5 years old, but no other child's disease; her health had always been good, except severe headaches at times after meals due to difficult digestion.

She went to the school of the sisters from 5 to 12 years of age; she had little intelligence, finding it difficult to learn; she never could write correctly. Her character was very intense and violent, impulsive; she had the habit of continually laughing and playing; at 13 she walked three or four times in her sleep, rising at night, going through the whole house, and returning to bed. In the morning she had no memory of her somnambulism. Her sleep was usually not sound, she dreamed often and laughed in her sleep. When 13 years old she entered a family as a servant, remaining twenty months, giving complete satisfaction; she worked well, was very obedient, and of good character. No one would believe that this girl would be a day in jail.

At the end of January menstruation began for the first time; on the 28th of February menstruation was accompanied with insomnia, headache, and enervation. From March 28 to April 3 there was nothing unusual during the menstrual period. On the 24th of April menstruation began, continuing until May 2, the date of her first incendiary. On April 29—that is, five days after menstruation had begun—she could not sleep at all, and seemed to see constantly fire about her bed. On April 30, suddenly the idea came to set fire; she repelled this thought as abominable. The next day the obsession was more vivid and violent. On May 2, about 10 in the morning, after returning from a funeral, she was seized with the thought to set fire. She struggled with all her might against this strange volition which imposed on her; she trembled all over, her heart seemed as if it would burst, her ears were buzzing. The obsession invaded her whole consciousness, causing such a painful agony that she was unable to resist. After she had set fire to the package of brushes she experienced great relief and an agreeable relaxation as a result. In her two following incendiaries, her experiences were similar, but the resulting satisfaction was not so intense as in the first incendiary.

This girl was of medium height, with a gentle and sympathetic face; she presented certain stigmata as large ear lobes, slight projection of the upper jaw, palatal arch pointed. She did not bite her nails. She showed no symptom of hysteria or trouble of the sensibility. Mentally she was below the average. In her emotions she

was well developed, she never did anything to cause anyone pain, and was never brutal toward animals; she manifested excellent sentiments in regard to her parents; her behavior in prison was the best; she was always polite.

She did not seem to manifest much feeling because in prison, though she expressed profound regret for her acts. When asked to express her sensations while under the obsession she said: "I set fire because I could not do otherwise; this idea came to me suddenly and I could not resist it; it was stronger than I; I proceeded in spite of myself; it was painful, but I was compelled to follow it."

There being an hereditary taint on both paternal and maternal sides, it was cumulative in this case. The psychical stigmata were much greater than the physical. Puberty destroyed the unstable equilibrium of her brain. It may be that the length of menstrual flow caused anæmia, which also helped in giving rise to the pyromanic obsession.

VII.—REFORM OF JUVENILE CRIMINALS.

The best methods of reforming young criminals are more or less a matter of opinion, for the causes of crime have not been sufficiently determined so that remedies may have an adequate application.

To treat a disease without knowing its cause definitely may be the best that criminology can do at present.

As in physical so in social disease, the individual subjects must be studied if the real causes of crime are to be found. Such professional and scientific investigation is the only path to the root of the matter. But such study has barely commenced in our country. Not merely the punishment of crime after it has been committed but, as Pestalozzi says, the education of man to do good and the killing of the cause of crime are what will protect the community.

VALUE OF SAVING ONE CHILD.

Every child kept from being a criminal wins for the state a good citizen, but every child becoming a criminal through the state's neglect of conditions leading to crime is a vicious parasite, and, whether free or in prison, feeds upon the people. The preventing of one child from going wrong may save the state the cost of some notorious criminal trial and protect the community from reading the details of the life and acts of some moral degenerate or pervert, tending to make him a hero rather than a culprit.

SIN OF MODERN TIMES.

Any description of a crime that tends to palliate it or make it interesting, or associate it with dignity or respectability so that the resultant impression is one of interest in, or acquiescence in, or condoning the evil, is the great sin of the press, stage, and literature of modern times. Such publications are a positive evil to society, on account of the law of imitation; and in addition, make the criminal proud of his record, and also develop the morbid curiousity of the people. It is especially the mentally and morally weak who are

affected.[a] But any description of crime that makes you detest the crime is moral in its effect, even though it involve objectionable details.

CHILDREN SHOULD NOT BE LEFT TO THEMSELVES.

Prevention of crime concerns the care of the young, and especially those who are criminals, vagabonds, paupers, homeless or without proper home, or in any way neglected by being left to themselves. The child is not master of itself, but its environment controls it. Perhaps in as many as nine cases out of ten the child will be what its surroundings tend to make it.

TWO CLASSES IN MORAL DANGER.

There are two classes of children in moral danger; (1) those who can be saved by ordinary pedagogic means, and (2) those who have need of some special method of reformation.

There are some children who, without being disposed to do evil, are led astray by their environment; sometimes it is bad companionship, sometimes their own parents force them into vice and crime.

SIGNS SUGGESTING VICIOUSNESS.

There are other children who seem to be vicious by nature. These often present a characteristic appearance. There is a certain animality in the face, the eyes are without expression, the forehead is low or depressed, the jaws are very large, the edges of the ears are rough, the ears extend out prominently from the head. Sometimes the complexion has an unhealthy color. Such children may be too large or too small for their age or they may appear older or younger than they are. Some do not look you straight in the face, but have a stealthy, oblique, or variable glance. Some stutter, hesitate, or become confused. These defects are only signs and of course do not necessarily mean the existence in the person of the things signified. They mean that such individuals will at least bear observation.

CYNICAL CHILDREN.

There are children who advertise their corruption, treating with effrontry whoever interrogates them, laughing at the questions, manifesting cynical pride, and glorifying themselves.

One learns to know the hypocrites and sneaks, who cry with effort and protest their innocence without appearing too desirous of escaping justice. It is easier to recognize the true character in children from 10 to 16 than in those younger.

SIGNS SUGGESTING SINCERITY.

A clear voice, open toned, well pitched, even under strong emotion, is a good sign. If the look is direct, a little elevated, if the eyes are

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[a] Man and Abnormal Man (S. Doc. No. 187, 58th Cong., 3d sess.), including a study of children, in connection with bills to establish laboratories under city, State, and Federal governments in the study of the criminal, pauper, and defective classes, with bibliographies.

This document may be obtained on application to any United States Senator or Representative.

directed straight at you, if the mouth has no contraction, if the arms, hands, and legs are in a state of repose, these are signs of a sincere nature, but only signs.

It is important to distinguish whether a child is bad by nature or whether its badness comes from its environment. A child might commit several serious crimes, being led astray by its surroundings, and yet not be bad by nature, especially if at the time it did not recognize the gravity of the crime, but later regretted it. Such a child should never be placed in company with a child who to all appearances is bad at heart.

CASES OF IMPROVEMENT OR REFORM.

In order that the reader may study the cases [a] for himself, those where the treatment was successful are first given, and then follow cases where reform proved impossible.

IMPROVEMENT THROUGH ENGLISH REFORMATORIES.

The reformatories and industrial schools of Great Britain have improved three-fourths of their inmates, as the following table indicates:

Year.	Reformatories.				Industrial schools.			
	Improved.	Doubtful.	Relapsing.	Unknown.	Improved.	Doubtful.	Relapsing.	Unknown.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
1882	74	5	10	11	80	6	3	11
1883	72	6	11	11	80	5	3	11
1884	74	6	10	10	80	6	3	10
1885	75	6	10	9	81	5	4	10
1886	75	7	10	8	83	5	2	10
1887	77	6	9	8	84	5	3	8
1888	76	5	11	8	82	6	3	9
1889	75	6	12	7	83	5	3	9
1890	75	6	11	8	84	4	3	9
1891	77	5	10	8	85	4	3	8

TWO CASES WITH HEREDITARY TAINT.

Girl, 13. She was 13 years of age. Her father was nervous and also had an affecton of the heart, but he was a sober man. Her mother was very nervous, subject to hysterical attacks. One brother died of croup, another of meningitis. She was of average height, sallow complexion, black eyes, dark brown hair, had narrow and receding forehead, ears well formed, but a little large. She knew how to read and write, but had no taste for study. She did not like to sew. She was a coquette, dressed with much care, and was cleanly. But she was giddy and hair-brained; she talked constantly, incoherently, and without sense. At times she was unconscious of what she said. She was very affectionate toward her parents, and while she liked her brother and sister, she struck them often.

Good training would help this child sufficiently to live properly in the community.

Boy, 11. The boy was 11 years of age; he had a flat forehead and nose; his ears were almost without lobes. He was very limited in

[a] Selected from special investigations.

intelligence and could barely read and write, was filthy in speech, and so violent and dangerous that he needed close watching at school.

His brother was insane and his father was an alcoholic and had served several times in prison for violent assaults. Much might be done to help this boy, but not without taking him away from his surroundings.

IMPROVED BY REFORMATORY.

Age, 12 years; length of head, 179 mm.; width, 160 mm.; circumference of chest, 69 cm.; height, 137 cm.; sitting height, 70.5 cm.; arm reach, 141 cm.[a]

At the right corner of the mouth was a linear cicatrix 2 cm. long prolonging the line of the mouth.

Nothing was known as to antecedents. The family were day laborers, living in an industrial village; their morality was doubtful; they allowed their children to be vagabonds and thieves. Arrested, the boy was acquitted and put under the charge of public charity. This boy had contracted bad habits, which were so deeply rooted that he could not be sent to a family. He was sent to a reformatory. After two years here his conduct was modified sufficiently to be given employment outside of the institution.

REFORMED BOY TWO YEARS' LIFE IN REFORMATORY.

Boy, age 15; orphan; length of head, 180 mm.; width, 156 mm.; circumference of chest, 74 cm.; height, 143 cm.; sitting height, 71 cm.; arm reach, 146 cm.

This boy was very healthy; he had been to school and knew how to read and write. He was brought up by his aged and feeble grandfather, who lived in a section where prowlers were numerous, intractable, and brutal in disposition.

This boy was taken from these unhealthy surroundings and sent to a school for correction, where his bad tendencies were put under control in two years.

SAVED BY REFORMATORY.

Boy, age 15 years, orphan; length of head 181 mm., width 168 mm., circumference of chest 73 cm., height 151.5 cm., sitting height 76.1 cm., arm reach 150 cm.

The boy had good health. He was educated by an uncle. He could read and write, was somewhat pretentious. He was placed in domestic service, but he soon began to steal, justifying it by a most revolting cynicism. His moral sense seemed false; it was necessary to keep him from temptation and to attempt to set his conscience aright. He was sent to a reformatory where he could make preparation to enter the army; otherwise he might be likely to fall back into crime.

TWO VAGABONDS REFORMED BY FAMILY MOUNTAIN LIFE.

These two were brothers, 7 and 10 years of age.

Boy 1. Father dead; length of head 164 mm., width 145 mm., sitting height 55 cm., height 107 cm., arm reach 102 cm., thin lips, pointed chin.

[a] When the arm reach is greater than the height it is generally regarded as a defect.

Boy 2. Length of head 175 mm., width 150 mm., sitting height 68 cm., height 124 cm., arm reach 120 cm.; slight scar on left eyebrow.

These two boys were healthy and vigorous, presenting no defect of hearing, seeing, or speaking, no anatomical stigmata. Nothing could be found as to their antecedents, except that the mother had rickets, stuttered, and was very limited in intelligence, leading a haphazard life, making her children beg.

These children never went to school, but were very active as vagabonds in several communities, where they were a pest, sleeping in barns. They would pass by food and fruit, but would steal a watch or other object of value. Finally, they were arrested and imprisoned. A committee of a local charitable society intervened and had these boys taken out of custody and put under the care of a good man. But they escaped and continued their voyage home, a distance of 30 miles. They were arrested the next day while in the act of stealing.

When the younger one was questioned as to his acts, he looked at his brother and at the questioner, raising his shoulders a little with a sense of superiority and pity. What shall be done with these boys who intend to live as they please?

These two vagabonds were sent to live with an honest mountaineer, to have a bed, a place at table to eat regularly, and to attend school. After four years of this life they were completely transformed and reformed.

HOPELESS CASES.

In vicious and criminal children the cause of their degeneracy can often be traced to hereditary antecedents, yet in some cases, as we have seen, careful but severe treatment will save them, where otherwise their bad instincts would lead them to destruction. If, however, such treatment, through neglect of parents or others, be delayed until the child is somewhat grown, it will in most instances fail, for criminal taint has had opportunity to develop and permeate the character. Such a child is morally frail, with little power of resistance and liable to fall under the least temptation. A few seem to have a sort of blindness and want of comprehension, being absolutely under the sway of their instincts and impulses. For these there is little or no hope.

INCAPABLE OF REFORMATION.

Boy, 14 years of age, father dead; length of head 170 mm., width 155 mm., height 150 cm., sitting height 77 cm.; he had a club foot and congenital paralysis. His father was an alcoholic, dying at the age of 35 of pleurisy. The mother had good health. She was treated brutally by her husband while with child. Two other children, a boy of 10 and a girl of 7, showed nothing unusual. The boy's paralysis did not prevent him from being active. He could read, but wrote with difficulty, though he had attended a number of different schools, private and public. He became involved in an immoral affair, which was his undoing before the court where he served as a witness and gave the details of the scandal. His imagination was perverted.

The child was sent to a reformatory, but without success in treating him. He attempted murder in the street. The defect in this boy was aggravated by the circumstances of his life; it was impossible to reform him.

GIRL, MORAL DEGENERATE.

Girl, age 13 years, had an extraordinary physical development for her age; the mother had married again. The girl was brought up by grandparents, who lived in a factory town. The child early showed vicious instincts which frightened the family. She was arrested for a series of thefts of goods displayed at stores. It was a case of precocious puberty. She went to a convent with the formal promise that she could leave after three months. As the time approached she declared if she was kept any longer she would set fire to the building. Then she was placed in several institutions, but all were glad to get rid of her. At one convent where she remained forty-eight hours she refused to eat; pretended there was something the matter with her eyes, so she could not sew. At another place where she remained but one night she frightened the sisters and boarders by twisting herself so when laughing that they thought her insane. At the convent where she remained some time she acted still worse; she would attack the sick and scandalize the personnel by her words and jests. She was vicious by nature. She suffered from a cerebro-spinal trouble and excessive sexuality.

RELAPSES INTO OLD WAYS.

Boy, 13 years of age; orphan; large for his age; he could neither read nor write and had little mental capacity. His father was an habitual criminal; his mother had a doubtful character. He was cared for by uncle and aunts with little means. He showed brutal instincts, stealing jewels and then breaking them to pieces. He was arrested and taken before the court. The local society took him in charge and found him a home in a good family; in two years, though not reformed, he was somewhat changed for the better, but he went back again to his old ways, himself recognizing that he could not adapt himself. After being returned by his guardian family he began to steal.

DEGENERATE GIRL WITH BAD PARENTAGE.

Age 15, mother dead; length of head 171 mm., width 151 mm., height 166 cm., sitting height 85 cm., arm reach 168 cm. There was a scar on the upper right jaw, another on the middle of the left jaw.

The father was an alcoholic and led a bad life. The girl was large and had the appearance of being 20 years of age; had excellent health, with the exception of an enuresis.

Reared by an uncle, she was put under the care of a good pastor, where she proved to be impossible. Arrested for theft, she was sent to a convent.

This is another case of cerebro-spinal trouble and excessive sexuality. She was sent to work in a manufactory, but she left and returned, telling a story she had invented. In spite of all efforts to reform her she did not grow better. At the last convent she lived in she broke a door to regain her liberty.

IMPULSE TO RUN ABOUT PREVENTS REFORMATION.

Boy, age 16, orphan; length of head 187 mm., width 144 mm., height 156 cm., sitting height 84 cm., arm reach 158 cm. Eyebrows near each other; dimpled chin; scar at end of chin; tattooing on left wrist, asymmetry of face.

This boy was reared by a brother-in-law. He was employed in a hotel. He stole $3 from one of his fellow servants. He was placed with an employer in the city and for three months with another employer, where he saved a little money. Unfortunately his impulse to be on the go brought him into the street, where it was not long before he was arrested.

VAGABOND NATURE TOO STRONG.

Boy, age 17, father dead; length of head 177 mm., width 149 mm., height 150.3 cm., sitting height 79 cm., arm reach 155 cm., health good.

The mother earned her living with great difficulty. Her boy, in company with an Arab, was arrested for being a vagabond. He appeared gentle, malleable, and manifested good intentions. He was placed in a family of a well-to-do farmer, who seemed disposed to aid him as best he could. For a few days everything passed quietly, but the boy associated with all the vagabonds coming that way. He was returned to his mother, who found him a place with a former employer. She had little hope that he would continue to do well any length of time.

PRISON COMPANIONSHIP CAUSED RELAPSE.

Boy, age 18, father dead; length of head 175 mm., width 156 mm., height 172.3 cm., sitting height 93.6 cm., arm reach 180 cm., good health.

Arrested for theft, he was sentenced for the first time to three months in prison. After serving his time his mother died. He was placed with an employer, where he gave satisfaction, but he met a confirmed criminal (recidivist) with whom he had been in jail. He suddenly left his employer to take up with his former prison companion.

BOLD ROBBER.

Boy, age 13; length of head, 165 mm.; width, 152 mm.; height, 135 cm.; umbilicus was prominent. This boy had a badly shaped palate (pointed arch); he had an enuresis. When 8 years old he was very sick. He spoke with difficulty, half French and half patois; was wholly illiterate. He was placed in service with several employers. His father was a gravedigger. The boy was very backward mentally. There were five other children, about whom nothing is known. This boy was sentenced to a house of correction for nineteen years on account of a number of bold thefts—getting upon the roof, opening the scuttle, and going down into the house.

CHILDREN NEEDING PROTECTION.

There are three general classes of children especially needing protection and study: Abandoned children, vicious children, and criminal children.

The abandoned children constitute the greatest number needing care. They consist of: 1. Foundlings whose parents are unknown. 2. Those deserted by their parents. 3. Paupers, without parents and without means of subsistence. 4. Those whose parents, through disease or physical or mental incapacity or detention or sentence for crime, can not care for them. 5. Children where parents expose them to vagabondage, begging, and idleness or children who through bad treatment are ignored.

By vicious children are meant not only those who may be vagabonds or beggers, but such as do not submit to their parents and so withstand education, as unruly children in school.

Criminal children, whose age of responsibility may vary.

SOME METHODS OF REFORM.

These methods of reform are in accord with the opinions of many engaged in practical work and are offered merely as suggestions.

PROTECTION OF CHILD BEFORE BIRTH.

It is important to protect the intra-uterine life of the child. Special care should be given to the woman with child by maternal care, by relief at domicile, by arrangement of work, by creation of asylums and of private maternities, and by examination into the paternity of the child.

PROTECTION IN EARLY LIFE.

The conditions of social life often do not permit taking a child from its mother, and she is not always capable of giving the child the necessary care. There should be established institutions for rearing children according to the best methods.

SCHOOL LIFE.

Hygienic principles should be established in the schools. No teacher, according to a French specialist, should have charge of more than 20 or 25 pupils. A physician or specialist should be present at the formation of the classes. He should always examine any pupil showing himself incapable of adaptation to the conditions.

VAGABONDS.

Young vagabonds less than 16 years of age should not be committed to jails or police stations or houses of arrest, but should be sent to an institution for observation, to determine what to do with them. Such inquiry should be made by a commission, one member at least being a physician.

The youngest should be assigned to families; the others should be sent to some reformatory school or to a clinical school, whose head should be a physician or specialist. Adolescents (16 to 20 years of age) should be sent to some reformatory without fixing in advance the length of time they should remain.

LOMBROSO'S METHOD.

According to Lombroso, one of the best methods of prevention for the "born criminal" is moral nursing; that is, the rearing should commence in the first months of life in the country, on the farm, in colonies, out of the reach of criminal association. A fight against alcoholism should be carried on by associations, by religious, political, and temperance societies, by journals, etc. All these agencies should be in connection with medical treatment.

VIII.—REFORM OF WAYWARD YOUTH.

There is apprehension that the excellent equipment of modern reformatories and industrial schools, such as electric lights, bath-room, most improved methods of heating, free medical service, free dentistry, excellent teaching, lectures, entertainments, the best of food, many comforts the poor would call luxuries, solid buildings, elegant situation, fine scenery, superb cottages approximating to a refined country home—that the providing of these and many other advantages for the young who have gone wrong may take away that wholesome fear of jail or prison, which doubtless keeps many a youth from committing crime; that all such comforts should be provided by the State for its enemies may make the idea of crime much less abhorrent and thereby tend to increase it among the young.

Let it be admitted that such treatment of wayward youth does sometimes lessen the wholesome fear of prison. It may be remarked that allowing the young to be arrested and remain in jail a few days will lessen such fear much more and have a damaging effect upon the youth forever after, if not preparing him for a criminal career.

But the State allows children born in unhealthy surroundings to remain in them, and until they break the law they are not considered subjects for reform. The State should give the young a chance, and the industrial school and reformatory, with all their elaborate equipment, are for this purpose.

EVERY CHILD HAS THE RIGHT TO A PROPER BRINGING UP.

Every child has the right to a proper bringing up. If it have no parents or its parents can not give it the rearing it has a right to, the community or State should do it. If its parents are unfit or unable or indifferent as to its welfare, the child is certainly not to blame and the State should see that it has a chance in the struggle for existence. Such a child at best will have enough disadvantage, when helped by the State, as compared with the child who has good parents. The fact that some parents would be encouraged to neglect their children if the State undertook to see that children are properly cared for is no reason why the children should suffer. Parents who

care so little for their children as practically to give them up are parents whom the children might as well be without. That there are many children in any community who have improper homes is a fact too well known. Almost any policeman can tell you of parents with whom it is detrimental for the children to live. As those children are to be future citizens, it is incumbent upon the State to see that they have at least a chance to become good citizens.

RESULTS OF EXPERIENCE.

The general modern principles and methods of reforming the young can be indicated in no better way than by giving the results and ideas of those who have had extensive experience in dealing at first hand with such problems. Some of the truths here stated may seem very simple, but their importance is none the less on this account. The unanimity of opinion among those engaged in reformatory work is striking, when the diversity and complexity of youthful natures is considered. The writer has taken his material from the reports of some of the leading reformatories in the United States, often using the words of these reports. Naturally there is some repetition, especially as to the need of a good home, but this only emphasizes the great importance of parental care which the reformatory endeavors to supply to the unfortunate young.

THE INDUSTRIAL SCHOOL.

The industrial school is not a prison, nor is it a penal institution where erring boys are confined and cruel punishment meted out to them. People conceive this idea because it is connected with the courts. Neither is it a place of confinement where they put bad boys merely to keep them out of other people's way. The industrial school is a charitable institution, educational in its general organization, for the mental, moral, and physical training of that unfortunate class of wayward, misguided boys, who by the very nature of their environment are either homeless, with no visible means of support, or have in some manner transgressed the laws.

It is not our aim to take issue with that class of theorists who insist because a boy, who, perhaps all his life, has been surrounded by bad associates, running wild in the streets with no restraining hand to retard his downward course; whose social conditions have not been the best, and who has in some manner infringed the law, is a criminal of the willful kind, and as such should receive the scathing ban of society's ostracism.

FEW BOYS SEEM DETERMINED TO GO WRONG.

True it is there are boys, and ever will be, who will not escape the penitentiary despite all the advice, precept, and good training you may shower on them. This class, however, comprises a very small per cent of the whole, when we consider the large number of the decent, respectable, law-abiding young men who graduate from industrial schools and who have taken their place alongside the busy workers of the world, proving themselves good citizens, making an honest living, and leading exemplary lives.

The so-called "bad boy" is not half so bad as his reputation. The greatest fault with him is that he is misunderstood because he has been neglected; he has gradually developed from bad to worse until at last he is in the clutch of the law. Then it is he is given up for lost, and oftentimes thrown in jail with vile, vicious, unlawful men who delight to further aid his downward course.

Boys who are not criminals, but the victims of circumstances, who have broken the law between the ages of 8 and 16, should never be placed in jail on a common basis with common prisoners. They should not be punished, but educated. Experience proves that they quickly respond to kind treatment and home-like influence. It is to this end the industrial school was established.

THE INDUSTRIAL SCHOOL A HOME.

In all respects the industrial school aims to be a father and mother to the unfortunates, supplanting as near as possible the good home left behind, and improving on those that are not what they should be. To many it is the best home they have ever known. It is so different from the street; so much nicer to be able to know where you are going to sleep—so many nice games, a large number of books, and a whole lot of boys to play with; all of whom seem to be doing the right thing.

The school aims to make it as easy as possible for the boy to do the right thing; and while we must confess all boys do not possess fine natures, yet we realize that aims are best attained, not by hard uncompromising lines of rigidity, or simply by excluding them from bad associates, but by good moral examples, patient study of the individual, constant regularity in habits of sleeping, eating, exercise, play, and a lively personal interest manifested among their teachers and officers in their sports, troubles, studies, etc.

HOW TO TREAT A BOY.

Place confidence in the boy; give him justice; wake the smoldering ambition that is dormant in him; do not treat him as a sneak or inferior; teach him to look up, not down; direct his attention where he will find the best, purest, and most noble things in life; encourage in him clean, manly sports; persuade him to do right for right's sake and not for the sake of policy; let him understand judgment is swift, sure, and certain to him who disregards the law, and he who will not obey must be made to do so. Teach him neatness, cleanliness, and correctness. Give him to understand that he is to be educated, not punished, and that he will be received into the business world according to his ability to accomplish things. In fact, let him understand everything he undertakes should be done in the nicest possible manner and that it is absolutely necessary for him to do his best. Try to instill in his very being a love and respect for honest labor, patience, perseverance, consideration for other people's property and opinions, impressing on him the importance not to back down when he meets a reverse.

METHODS SIMPLE.

Methods of keeping the boys are simple. We work no methods of legerdemain to convert the self-willed boy of the street, who perhaps has been a menace to society, an enemy to himself, and a danger to the public in general, into a quiet, peaceful, even-tempered, smooth "willy-willy" boy with a strong desire to obey each rule to the letter and a burning passion to execute every command in a faultless manner. Boys, as a rule, are not made that way—it is not natural—and as a class they have not an overamount of respect for watery sympathy—they want something more stable—it is facts and actions that count with them. They are quick to discern any movement that is for their welfare and are, if approached in the right manner, nearly always capable and willing to leave their past life behind and take up the task of character building.

Of course, boys sometimes run away, just as they leave some of the best, most congenial homes in the land to wander from door to door—veritable outcasts begging their daily bread; but the class who are placed on their honor, and then run away, are not the real representative body, and the chances are they will be ne'er-do-wells all their lives, though it must not be concluded because a boy runs away, we lose all hope in him, for ofttimes such turn out well.

UNHEALTHY HOMES.

We often receive boys who are from homes that were not the best, that were broken, unlawful, unnatural; their social connections all their lives have been the worst possible; they would have not the remotest idea of manners or refinement—almost wholly uncivilized—having known nothing but kicks and cuffs, and only been taught vice, dishonesty, and distrust of humanity in general, and as a natural consequence regarded the law as an enemy. Their only church was the corner saloon, or the dark alley, where they spent their time smoking, gambling, or conspiring to confiscate other people's property to themselves, and as for the word "obey," they never knew its meaning. Yet some conservative people often ask us to reform this class of boys, who from almost infancy have never felt a firm, restraining hand, but have essayed to follow their own wills and proceed along lines that offered least resistance, often encouraged by those who should have been a shield and a guide to their young lives.

Again, we receive boys, whom some are pleased to term bad boys, from homes that are modest, congenial, and lovely, whose parents are good, respectable, law-abiding citizens. Yet it is plainly true their boys do not always conduct themselves as they should. We might suggest in some cases parents do not understand their children; are not patient enough; or because of household duties or pressing business, there is a lack of parental attention, or years of overindulgence have taught the boy he can do as he pleases and they nearly always please to do wrong.

BOYS DESIRE ATTENTION.

Boys like people to take an interest in them, and they like to take an interest in things. They want to be noticed, encouraged, and if they can not find their boyhood at home, the chances are they seek for it on the streets, and once they get the habit of loafing, the end is not far off. They are thirsty for sympathy, love good, clean companionship, and a lively interest taken in their boyish desires, games, etc., and this generally proves that the boy is all right.

It must be understood that the work is principally to build from the bottom up. It is necessarily slow, for we often encounter that class whose will has been their only law; they do not always readily take to the right way of thinking, neither do they always quickly respond to kind treatment; are often unappreciative, and unattentive to their duties; and while we are a strong advocate of moral suasion, we know with a certain class of boys, in fact all classes, if moral suasion fails and you do not use more strenuous means of correction, you certainly encourage them to travel further on the road to destruction and in the end they may be irretrievably lost.

THE BOY'S ENTRÉE.

In all institutions there is a beginning for every ward. He enters with all sorts of ideas concerning it. Some approach it in fear and trembling, some with complacency, some with gladness, and others with defiance or even arrogance; but observation teaches that all soon approximate a common level. They may lack education, refinement, and moral training, but their perceptive faculties are unusually bright. A boy can tell at a glance what kind of a man he has to deal with, and his first impression is generally a right one. In consequence of this precocity, he is soon enabled to adjust matters to his own satisfaction concerning his surroundings. Or if an older boy, sullen, rebellious, looking for trouble, enters the institution, he finds himself in a quiet, busy, and well-ordered community, each member of which seems to be behaving himself. One of his first experiences is introduction into the military organization, where he gets physical exercise of a kind and quantity to dispose of all his superfluous energy; and as a rule he speedily comes to realize that he is a very small part of a very large machine, and that it requires a bold man, when a thousand others are marching a certain way, to attempt to go in a different direction. This gets him into a proper frame of mind for undertaking his other work, and in most cases, after a few attempts at independence, he submits to go along with the current, and there is no trouble whatever with him from a disciplinary point of view.

DISCIPLINE.

All children are not alike bad, therefore all do not need the same restraining influences. Some only need the timely caution, some the stern rebuke, while others will never know your meaning or appreciate their own situation until you apply the most severe punishment. These are all necessary appliances in child training, but care should be exercised in their administration. The line must be drawn on the

side of leniency, and justice must balance the scales or you will antagonize. In no case ought a child be corrected in the heat of impatience or the flush of anger, but in all well-governed schools there should be a proper time for the rendering of accounts, and then only to such persons as are capable—a man with a mother's heart and sympathies, combined with an offended father's dignity, one who can act coolly and quietly and appreciate the fact that what is done in haste is usually repented at leisure.

EDUCATION.

Education does not make the man; it adorns him and should bring all his faculties into their fullest use. It is development, and is surpassed in grandeur only by manliness. A man may be an educated nobody. He is, in his proper sphere, a triple combination made up of moral, intellectual, and animal capacities. Where he is lacking in any of these, cultivation becomes a necessity, and education resolves itself into a complex machine; accelerating and retarding are the bases of its operations. It is a mistake to educate the head at the expense of the heart and hand. The teachings of the school, the workshop, the garden, the farm, and the heart attuned to all that is good, noble, and true, is education. These distinctions ought to be brought before the child in simplicity, and when he is in a condition to receive them. "An occasional dropping is better than a rainy day for a tender plant."

The children should be taught that the smiles of Nature are not constant; that they must accept of sunshine and shower, dark days, and weary nights; that the friends of to-day may become the enemies of to-morrow; and that they must be ever prepared to meet adversity on the moral plane.

DIVERSION.

Diversion is the magical wand, the teacher's panacea, and the boy's scapegoat. Those who have labored with children will agree that there are times when everything seems to go wrong with them. We may coax and we may punish, and all to no effect; an incompetent teacher is in a dilemma, but one with tact will observe readily that the children are nervous from application or some other cause and will immediately employ a little diversion. After a good laugh, the telling of a story, or the singing of a song, all will at once settle down to work perfectly satisfied and never know how the change came about.

To play is the delight of every boy to a greater or less extent; certain limits, however, should govern them, even in amusement. All should be considered, whether in school, at work, or at play, with the same spirit; no cheating, no false representations, no subterfuge should be tolerated. It is just as necessary to use vigilance and discretion during their pastime as when otherwise engaged.

EMPLOYMENT.

All children should be considered capable of learning. What they have not naturally they can obtain mechanically, but all are not alike adepts in any pursuit. It is questionable whether a child knows what he can do best, therefore persons managing children ought to

be good judges of human nature, and thus be enabled to solve the problem of life in its active sphere of labor for them. All should learn some handicraft whereby to support themselves, and those who may be hereafter dependent upon them. Should a boy exhibit traits of character pointing toward any of the professions, or any particular line of business, it is no burden to carry with him the knowledge of a good, substantial trade, for, should everything else fail, he will turn to it as his capital in store, and by it raise himself with dignity and independence.

THE LIBRARY.

The library is essential, and the more it is used the less trouble we shall find in the performance of our arduous duties. Some children will devour the contents of a book in such a manner that it does them but little good. We desire that they will take time for thought and digestion of the matter and subject. Others do not have a desire to read at all, consequently we must read for them. Children's books should be children's reading; each stage in life has its tastes in literature, and we must not expect to put "an old head on young shoulders." Reading matter of a trashy nature should always be excluded from the young, especially the blood-and-thunder dime novel.

MUSIC.

Music is an incentive, and breathes the spirit of a better life. It is elevating and conducive of great power over the affections of the heart. Children love to sing, and the good old songs and hymns learned in childhood will follow to old age. In one reformatory the band plays six times a day when the boys march to and from their meals. The refining influence of the music is here utilized.

THE MANNER OF DISCIPLINE.

All children are liable to error, but there should be proper discrimination between moral and conventional wrongdoing. Our manner of disposing of such matters is to keep a record of every important wrong a child may from day to day commit. This report is submitted by the officers and teachers of the school to the superintendent, in writing, without exaggeration or diminution, at which time he holds a moral review, calling up each child separately to make answer to the charges preferred against him. This is a time for care and forethought, for earnest consideration, and the full exercise of all the knowledge at our command. There must be no haste, no harshness, and while we should be lenient, yet the wrong must not be forgotten. This is the time to make impressions, pointing the child to the consequences for the present and for future manhood.

We do not desire to hold a child longer than is necessary for his good. As soon as he becomes established in well-doing and has sufficient education to enable him to transact business, he should return to his home, or some home. Should he not prove strong enough to do well among his old associates, the parents or guardians have the right to send him back to the school, where he must make another start. This is a wise provision, and holds a restraint over the boy, even in our absence, until he becomes a man. In the case of a child who has no home, we are to him father, mother, and friend, whether he is with us or not.

THE CHILD WITH NO CHANCE.

Often born in poverty, amid dissolute surroundings, the child first sees the light where dirt and squalor reign; he grows up amid these surroundings; his playground is the street or alley, or worse; his companions are those who are equally unfortunate; he has but little if any home life, the parents concerned only in the struggle for existence and frequently engaged in vicious employment, are not able to give him more than an occasional thought, and when they do it is rather to serve their own selfish purposes than to benefit the child. Just as soon as he is large enough he is put to work to earn something to help the family, and now he comes in contact with an older and usually a rougher class than himself. The chances are that he has not been permitted to attend school, or if so, has played the truant, and so has neither the training nor education with which to begin life on arriving at the period of adolescence. At this time in life he frequently runs away, or is obliged to leave home and shift for himself; and left largely to his own devices, with ill-defined ideas of right and wrong, with but little if any educational advantages, and but little or no moral or religious training, he finds it difficult to obtain the means of living, soon violates the law, and thus naturally gravitates to the industrial school, reformatory, or prison.

POWER OF HABIT.

Enforced regular habits and systematic physical exercise enable almost every inmate to leave the school sounder and stronger than when he entered. Long-continued military drill makes order, neatness, and respect for law and authority habitual. It may be said that these things affect only the physical and mental sides of nature, and what children need is moral improvement. It is true that at the start the average boy earnestly applies himself to these things without any love for them, and for the reason that he is told that only by making a certain record of proficiency in them can he be released, but in the doing there comes in time a development of that indescribable something which we call character, and everything is now looked upon from a different and better point of view. He then acquires the power of persistent and concentrated effort, changes his aims and ambitions, and becomes receptive to the more direct moral influence of the school. Through these and similar instrumentalities the object of the institution—reformation—is accomplished with reference to the majority of the inmates.

MILITARY DRILL.

Military drill develops the attention as well as the muscles. Perfunctory movements can not be tolerated. In the manual of arms one is required not only to perform a certain muscular act, but to do it at the same time and conform exactly in final position with from 60 to 600 others. The hesitation of one cadet would result in delay and inconvenience to all. Disobedience in rank, therefore, becomes unpopular, and the habit of obedience is formed and strengthened by the daily and hourly repetition suggested by the very word "drill." The drill is planned not so much to perfect the cadets in exhibition movements as to develop in them the qualities which mark good soldiers in active service—obedience, order, and faithfulness in the performance of duty.

VALUE OF A GOOD HOME.

A great many citizens do not seem to appreciate how much good wholesome home training does for a boy in the way of keeping him out of trouble while he is passing through those years from 10 to 18, when he is neither child nor man, is easily impressed, quick to follow the leader, to be good or bad; and if for any reason his home life does not restrain or entertain him, he is quite apt to drift and get into trouble, though he may be at heart the kind of a boy who would make a good man under favorable conditions.

It is an easy step for a boy who does not have just the right environment to get into the habit of running away from school, and unless there is an interest taken by the parents and an understanding between teacher and parent as to just what the pupil needs in the way of encouragement to help him over the hard places, he is apt to follow the course that offers the least resistance and take up the habits of the gamin and the tough whom he meets on the street. There is a tendency on the part of every boy during these years, when character is being formed, to imitate or follow the boy who dares to do things out of the ordinary, from throwing paper wads in school to smoking cigarettes in the basement; a sort of hero worship of the wrong type, and unless strong lines are thrown out he is apt to lose his bearing and become a lawbreaker. His offense may be anything from running away from school to stealing junk, robbery, or, in fact, anything in the whole category of crime. He has taken on many bad habits in his journey so far, has in many instances little respect for law or order, has not a clear idea of property rights, has not been taught that he is only entitled to those things that he has earned or acquired honestly, and has no conscientious scruples about taking what does not belong to him. This does not apply to all boys. A good many have had good home training, but in some instances are victims of broken families or intemperance and, for one reason or another, are off the track.

REFORMATORY A BUSINESS ECONOMY.

Turning a willful, wayward boy, often more sinned against than sinning, from his evil courses and making a useful, law-abiding, tax-paying citizen of him, is, leaving the humanity of it entirely out of consideration, the wisest sort of business economy measured by dollars and cents. To take friendless boys, secure positions for them and make them permanently self-supporting and self-respecting (on the basis of 209 boys) has cost, per capita, $75.21. Of this cost the boy himself contributes one-third. This is what a certain institution adds as a note:

> The reform school does not, nor does it claim to, reform all the boys who come into its keeping. Good parents, with whom no institution, however wisely managed, can compare, do not always succeed in raising to manhood sons who do them honor. Boys go astray in the world in many ways and for many causes. Some have no parents and run at large, subject to numberless temptations. Others have parents whose precepts and examples harm instead of help them. In the cases of others the parents have not the time nor the means, perhaps lack of inclination, to give them that constant supervision they require. They cease to go to school. Idleness takes the place of industry. Desire outrunning their means of gratifying them, they take what they are too idle to earn and lack the self-restraint to deny themselves. Very soon such boys, exempt from the wholesome restraint of watchful discipline, become curses to themselves and to their communities.

REFORMATORY DISCIPLINE.

Upon the arrival of such a boy at the reformatory the daily routine of his life is changed. He is under strict discipline all the time. He is well fed and well clothed, has a comfortable place to sleep in, has his hours of recreation, and his nurses when he is sick. But he must go to school. He must work a portion of each day at some useful occupation, during the course of which he will learn one or more trades by which he may earn his living after he leaves the school. He is in a school, the rules of which are more numerous and exact than the laws of the State. His breaking of these rules is surer of detection and is followed by penalties swifter and more certain than imposed for the breaking of the laws of the State. His privileges in the school and his release from it on his "honor," depend upon his cheerful yielding to wholesome discipline, upon his industry in the school or at whatever work to which he has been assigned, upon his treatment of his associates and obedience to those in authority over him, upon his truthfulness and trustworthiness, his honesty and manly qualities generally. When he has thoroughly reformed and yields to the rules that obedience, for lack of which to the laws of the State he was sent to the school, he is prepared to return to his home, if he has one, and it is a proper one, or a proper one can be procured for him.

MORAL TRAINING AND EDUCATION.

The training that must be relied upon to bring about the change in character does not differ from the training that develops character and ability in the case of the normal individual. No industrial school or reformatory possesses copyright methods of moral training. It endeavors only to supply those things that the boy has failed to receive in his earlier training. Among the very common neglects of his early life is that of school attendance. To make up for this, the boy is placed in school.

Many agencies are operating to drag children down. Homes broken by death, divorce, and desertion; parents utterly unfit for parenthood; stepfathers and stepmothers who have no love for their unfortunate stepchildren; evil companionship, poverty, and other forces are busily recruiting ranks of the delinquent class who must be cared for in this school. The one great universal defect is moral weakness. There is some mental, some physical delinquency, but every boy sent us is weak morally. He has little or no conscience. A man without a moral conscience is a bad citizen. The delinquent boy was never trained to feel the sinfulness of wrongdoing. His only concern is not to get caught. He fully agrees with the boy who said: "A lie is a very present help in time of trouble." With their disposition to profanity, untruthfulness, and larceny, inherited from several generations, we have a stupendous task set us so to teach, train, influence, direct, and reform them in the short space of time, that they may go forth and develop into good men. We can report 75 per cent doing well—some better than others—but so many at least are making a manly effort to keep their parole agreements. Some of these will probably lapse, and others not doing well will probably improve. Most of the boys going out really want to live a better life. They promise to keep out of evil ways, and

are honest in their promises, but many are too weak morally to stand out against the temptations of life. The social side of the boy's life is carefully looked after. This is done not only with a view of keeping his interest alive, but of making him overcome any diffidence he may have about meeting people. When the boy feels that he can do something he is more encouraged to mingle among people, and is thus able to gain friendship for himself.

CAUSES OF JUVENILE DELINQUENCY.

Boys are born with certain physical characteristics. These characteristics persist with the utmost tenacity. It is equally true that boys are born with certain intellectual aptitudes. These likewise are persistent, but capable of improvement; yet it is true that the lack of certain mental activities may never be overcome, however skilled the training. As it is with the physical and intellectual, so it is with the moral. The lack of certain moral sensibilities is as inherent, fundamental, and persistent as either physical or mental characteristics. As the moral qualities are more elusive, so the change through moral training becomes more difficult and the results less apparent. This, however, is the problem of the industrial school or reformatory. Into this institution are placed the most hopeless cases to be found in the population of the State; those that society, the church, the schools, and the courts have failed to save. The industrial school must do what all these forces have failed to do, or it has done nothing. The terrific force of inherited tendency to crime, the blighting influence of vicious homes and vicious companions must all be met and conquered by the training and education of the industrial school. Every boy that is received within its doors is the resultant of the two great forces of heredity and environment. If the former predominates, the task of reclaiming, though not a hopeless one, is one of extreme difficulty—in fact, is not certain of having been accomplished so long as healthy activity remains—for relapses may occur under great temptation, even after years of successful resistance.

The increasing extent of juvenile depravity is one of the startling facts that the published data of modern investigation reveal. The vicious, criminal, and immoral lives led by some boys emphasize the fact that familiarity with crime and association with criminals make the street, rather than the home and school and church, the teacher of youth. The influence of vicious and improvident homes, where boys of tender years are allowed to come in contact with crime in its most revolting aspect, is an important factor in placing the responsibility for a large portion of juvenile delinquency where it belongs. The law can not be depended upon to regulate these things. With a strange persistency it continues to deal with the offense instead of the offender, although it is for the good of the latter that the laws are made.

PAROLE FROM INSTITUTIONS.

It is morally certain that a boy or man who can or will not earn his release or parole from reformatory institutions by obedience to their just and easy rules, when he is exempt from the perplexities and uncertainties and inequalities and injustices of the world, will not obey those laws which the world at large establishes as its rule for its

security. Since the boy's reform is only partially effected when paroled, and since the one and only purpose of schools is to accomplish the boy's reform, it is easy to appreciate the importance of careful and faithful supervision of the boy while on parole. As much depends on the kind of a home he is to have, it is necessary to make an investigation of the home. Statistics show that the great majority of our boys come from poor homes—homes of poverty and moral neglect; homes where death, divorce, and desertion have robbed the children of everything that is supposed to make home sweet. About 30 per cent of the boys are entirely homeless, while many others would be better off were they homeless also. In respect to the home, there are three classes of boys: First, those who have fairly good homes; second, those who have no homes; third, those who have wretched homes. The problem is to deal with the latter. Boys who have good homes can return there. Boys who have no homes can be homed with good people; but those of the wretched homes clamor to go back, and the misguided parent pleads to have them, while to send them back is but to have them returned in a short time.

THE CRITICAL TIME.

The critical time is when the inmate leaves the institution to begin life in the world. Boys over 15, with new cravings and development of social interests, are much less likely to be contented with farm life than younger children. It is necessary to follow up, advise, assist, and restrain boys on parole. With none to advise and encourage them they may become discouraged and fall.

Some boys on leaving are lost track of at once. Some of these are the best, some are the worst. They may be ashamed to have it known that they were ever in the custody of the courts, and would rather have their name changed than to have it known that they were ever in a reform school. But the great majority are willing to have the truth known. In many schools it is claimed that 70 per cent are reformed and 30 per cent go down. Thirty per cent is a small number when it is remembered that there are charges against everyone sent to an institution.

SOME RELEASED TOO SOON.

There is a feeling among those in charge of reformatories that some of the inmates are released too soon; although their time is up, they have not been molded sufficiently to withstand temptation. The superintendent of a reformatory should be allowed to decide such cases. No person, no matter at what age, should be allowed freedom unless there be reasonable probability that he will not be dangerous to life, property, or public peace.

Every inmate leaving a reformatory should be made to feel and understand that he has left a home to which he can always return should temptation prove too much for him in life's struggle. Some boys sent to the school reach the age when they must be released under the law before the work of reformation sought to be secured, and greatly to be desired, has been accomplished in their cases. Any boy committed to the reform school who has not attained his "honor"

should not be released, but be sent to the reformatory on an indeterminate sentence to remain there until, under the rules of that institution, he has earned by his good conduct his release, or having proven by his bad conduct that he is irreclaimable, be sent to prison.

THE GIRLS' INDUSTRIAL SCHOOL.

The industrial school for girls is not a house of correction, but is designed as a refuge for girls between the ages of 6 and 21 years, who, by force of circumstances or associations, are in manifest danger of becoming outcasts of society. It is not a place of punishment to which its inmates are sent as criminals—but a home for the friendless, neglected, and vagrant children, where, under the genial influences of kind treatment and physical and moral training, they may be won back to ways of virtue and respectability and fitted for positions of honorable self-support and lives of usefulness.

Girls committed to the school become wards of the State. By the act of commitment fathers and mothers lose their parental rights and responsibilities; and the board of trustees, with the principal matrons, assistant matrons, and teachers, in behalf of the State, become as parents to the children. In one institution there has been received 1,030 girls, all coming under the head of delinquents, and of all colors, conditions, and nationalities.

Many of the girls were not naturally vicious, but have either been led into wrongdoing by those older and of stronger mind or have been forced into it by home conditions. The homes that most of our girls come from and the kind of parents they have could not well bring about other results. Sometimes it is the ignorance of parents, sometimes the avarice, and often the viciousness brought about by drunkenness, which is the potent factor.

MOST GIRLS READILY RESPOND TO GOOD TREATMENT.

Girls respond physically, mentally, and morally to the orderly life of the school. As they are at an impressionable age and free from distraction, they are easily led to accept their duties in the industrial and book schools. This work becomes a pleasurable outlet for their energies. To many of them on arrival cleanliness is a stranger, and it is not easy to reconcile them to the rules in this respect. In the matter of classification, about one in ten passes to the lowest grade, and only a half dozen of these are persistently recalcitrant. Upon the whole, they are more amenable to the lighter forms of discipline than older girls. Although the impulse to run away overcomes them more readily than older girls, it is nevertheless true that they hold less fixedly in mind the idea of getting their freedom and show a contentedness with their daily life after the period of quarantine is over. The habits of the younger girls are not so fixed as in older girls. They are more amenable to lighter forms of discipline than older girls; more curious, hence more easily interested and pleased; they talk less of getting their freedom; they are more active and less ready to settle down to steady habits of work; they are all backward in school; they are able to concentrate attention for only a short period of time; few know how to dust, sweep, wash, cook, or sew; they must be taught the common decencies of life.

METHODS OF REFORMATION OF GIRLS.

The aim is to develop healthy bodily and mental activities. There is little of repression. The effort is to hold in check, and if possible to eliminate, vicious tendencies by fostering a healthy development of the physical and mental and moral life. The means to this end may be described under the following three divisions:

(a) *Physical culture.*—A careful examination of each girl is made by a competent physician soon after her arrival. Calisthenics and gymnastic exercises suited to her years and bodily conditions are prescribed by the instructor in physical culture, and practiced in a well-equipped gymnasium.

(b) *Educational work.*—The object of the educational work is to arouse interest and to develop skill in all that pertains to the management of an ordinary household, and to give to all the best common school education.

(c) *Moral instruction.*—The moral instruction is enforced by practice and example rather than by precept. The officers and teachers are all selected with reference to their personal qualifications and influence upon the girls of the every-day life of the institution. Girls upon admission are kept apart from the other inmates until their characters and habits are ascertained, and are then placed in one cottage or another, according to their characteristics. Corporal punishment is prohibited. For disciplinary purposes, resort is had to withdrawal of some privilege or opportunity which would be prized. In the rare instances in which anything further is required, there is seclusion in well-lighted isolated rooms under medical observation, with light but nutritious diet and regular outdoor exercise.

There is hope for the girl with an uncontrolled temper, habits of petty thieving, and sexual weakness. Such a girl will have upsets, but she needs some one to sympathize with her and guide her. She is not troubled with inertia. The typical profligate is contented and soft. Some girls, like their parents, are so crude and ignorant and have so low a standard of life, that if they can be made morally decent and able to earn a living, little more can be expected.

When institution girls are sent out, they feel more responsible to strangers than to their parents or relatives at home; they are often sent to strangers first before being returned to the freedom of their own home, where they may not feel obliged to do their best.

It is the belief of many that a girl should be in an institution for at least three years, but that she should be given repeated trials, for long seclusion does not fit her for the outside world; correction can not be consummated in an institution where the life is necessarily one of rule and routine and where personal responsibility is very limited.

SUGGESTIONS TO EMPLOYERS OF GIRLS ON PAROLE.

While these suggestions are special, many would be useful in general:

1. Do not expect the girl to know how to do all kinds of work. She needs teaching, and in this you must be patient and give her encouragement.

2. She must be taught neatness in everything, and to keep all rooms in perfect order, and under no circumstances be permitted to

have her own room untidy or in confusion. She should also be taught to keep her own clothes in perfect order, clean, and whole.

3. She must be respectful and ladylike in her bearing and language, and no one about the house should use improper language in her presence.

4. It is expected that she will attend church when convenient. Great care should be taken as to her associates, and she must not go out evenings except in company with some member of the family or with some friend in whom you have the utmost confidence.

5. Do not seek to draw from her information as to her past life, and never refer to her disparagingly concerning that life, if you have occasion to chide or reprove her.

6. While you should give her your confidence and let her feel that you trust her, yet do not throw temptations in her way.

7. Do not try to impress upon her mind that she must be watched everywhere that she goes, but at all times let her feel by your example and advice that she can not by any conduct afford to court criticism or let the faintest suspicion of wrong arise.

8. She is to have the privilege of unrestricted correspondence with the officers of the home. The employer is not expected to read her letters. Every letter she writes must be sent to the home. If she receives any letters which have not been sent to the home they must be forwarded at once, without breaking the seal, to the home visitor.

9. That portion of her wages that you are to pay her must be paid weekly in cash, the reserve fund, as per contract, to be remitted to the home monthly.

10. In case of sickness, if it is serious, notify the superintendent and see that she does not suffer for lack of medical attendance.

11. In case of male inmates in the family let care be observed as to sleeping apartments, so that her room may not be accessible without your knowledge. This is the most important feature in all your duties relative to the proper care for the girl intrusted to you.

12. Study the girl's disposition, and we recommend that while you are firm in your discipline you at the same time show a motherly interest in the girl's welfare that shall win her confidence.

IX.—UNRULY, VAGABOND, AND CRIMINAL CHILDREN.

It may not be without value to give the results of some studies of children, illustrating the close relation between unruliness, vagabondage, and crime.

The main cause of unruliness is perhaps the ignorance or neglect of parents. The child disobeys the parent and runs away from home, disobeys both parent and teacher and plays truant, tending toward vagabondage, which in turn leads to crime.

The unruly child can be destructive, indolent, malicious, violent, a liar, thief, assassin, and degenerate. Before giving illustrative cases a few facts as to unruly children in general[a] may be noted.

In a study of the Washington school children by the writer, it was found that unruly boys have less height, sitting height, and weight than boys in general and are also inferior in head circumference.

[a] See "Man and Abnormal Man."

It was also found that the unruly boys (that is, those unruly most of the time) constituted more than 5 per cent of all the boys. Unruliness increases with age, as does laziness, reaching its maximum at fourteen. The number of unruly girls is so small as to be insignificant.

Unruliness increases with age. Crime also increases with age. A much larger proportion of boys are criminals than girls; a similar, if not greater, proportion of boys are unruly.

Nearest age.	Boys.			Girls.		
	Whole number.	Unruly.	Lazy.	Whole number.	Unruly.	Lazy.
		Per cent.	*Per cent.*		*Per cent.*	*Per cent.*
All ages	7,953	5.47	1.33	8,520	0.25	0.22
Six	147	2.72	.68	131	.....	.....
Seven	533	3.38	.19	508	.39	.....
Eight	787	3.81	.26	754	.13	.39
Nine	878	4.56	.68	883	.11	.11
Ten	930	4.84	1.40	939	.21	.....
Eleven	862	6.84	1.51	931	.43	.21
Twelve	986	7.20	1.52	876	.23	.34
Thirteen	926	6.70	1.73	966	.31	.10
Fourteen	784	8.16	2.17	833	.12	.60
Fifteen	528	5.87	1.70	655	.61	.61
Sixteen and over	592	1.86	2.20	1,044	.10	.....

The first manifestation of theft in children is in the family, where they take little things; then money. Such thefts are not always regarded seriously, it being supposed the child will outgrow the propensity. But it will not be long before such a child, when good opportunity comes and the habit at home has made it bold enough, will steal from others. Thus the child, if not severely reprimanded, believing itself to be beyond punishment, begins to steal at school where it may not run any great risk. Having reached this stage, it is but a step to steal generally.

In every large school there are a small number of unruly children, who are the plague of the school, who take a great deal of the time of the teacher, as well as testing his patience. Kind treatment and persuasion are in vain; only force has any effect, and that may be temporary. They run away from school, steal all sorts of things, they are coarse, insolent and always ready for a fight.

In class they are the cause of continual disorder; they are not only lazy, but refuse to work. They are impulsive and irritable; will not allow anyone to controvert their ideas. They rise up without reason, talk loud, and rebuke their comrades or teachers. Such children are abnormal, if not criminal, and need special care and training, otherwise they may spend some of their life in prison. They should not be allowed to contaminate the other pupils and should be placed in special schools. They may be incapable of controlling themselves; they seem to be unstable in all their ways, mental and physical. They can not control their attention; they no more than commence to read than they wish to write or cipher; even in their plays they pass quickly from one game to another.

The destructive impulse is common in children, especially unruly children. By education and training it is usually controlled. But in certain cases this impulse is only temporarily suppressed and may manifest itself at the least provocation.

One child escaped from school through a window, jumped over a fence into a neighboring yard, and threw stones at the girls' school

and broke several windows. The child had no motive. It simply wanted to satisfy its desire for destruction.

Some children have in addition to their destructive impulse a desire to molest others, by insulting them. One child used to go daily to a fruit store near school and make a noise in front of the store without any motive. One day he took dirt from the gutter, and he threw it into the store.

When such children are questioned as to their motives, they invent motives or excuses, or hesitate and say they don't know. Some seem surprised that they should be asked to explain.

No. 1. She was 9 years old, blond, long head (dolicocephalic), blue eyes, orbital arches prominent, flat nose, giving her a mongolian face. She was lame and walked with a crutch. She was an alcoholic; coarse in her language, cynical and lewd, malicious, tricky, easily made angry, striking her associates without reason, and amusing herself by tripping them up with her crutch.

There are violent children who show their propensities under slight provocation, as in a quarrel with a comrade; it seems to be impossible for them to control their temper. Others, however, act with premeditation and reflection. A certain child had a quarrel with one of his schoolmates. The teacher interfered, and the trouble seemed to be ended; but during recess the child procured a bottle and struck his comrade a dangerous blow on the neck.

The most of children who are vagabonds are, according to Laurent, not forced from necessity to run away from home. They are generally below the average age mentally; school work is difficult and odious to them. They commence to play truant and gradually remain away from school longer and longer. They undoubtedly find much pleasure in roaming about in liberty, free from reprimands of teachers and parents, free also to indulge themselves in all their vices.

It is almost always in summer they run away, sleeping on a bench, in a woodshed, lumber yard, or in some old abandoned building, and especially any place easy to enter without danger. Buildings near the canal are especially sought, where they can find fruit to eat, begging or stealing for the rest of their food.

The necessity of food makes every vagabond a beggar, and often a thief. While some children beg in a state of vagabondage, others beg occasionally, out of school hours, in order to buy some candy or other dainty. Others are forced to beg by their parents, who accompany them, or rent them out to others. But, as before mentioned, few children are forced into such life. As will be seen, vagabondage is a dangerous habit, leading to a criminal career.

Vagabonds and beggars constitute a large proportion of the children arrested by the police. In large cities the street is a school for vagabondage, implanting immorality in the nature of the child.

Vagabondage depends sometimes on temperament. It may be due to accident or poverty. Two things can hold the child home: Solicitude on the part of the parents and the attraction of the fireside. But when parents are indifferent or occupied away from home, when the fireside is sad and cold, the child may find the street more hospitable.

No. 2. He was arrested at about 11 o'clock at night at the door of a theater. He showed no sign of degeneracy in himself nor in his

antecedents; was 12 years of age. He could not write and could read only with difficulty. During the daytime his parents could not exercise much supervision over him, of which fact he took advantage, staying away from school and becoming a vagabond in the streets of the city, where he always found little comrades to play with him. His great desire was to become a large boy and to work and earn his living, but he had no idea of the trade he wished to follow.

This case approaches those who desire no more to go to school, but to work in the country, considering a sojourn in the country a supreme pleasure. But those brought up in the country, who are discontent with their lot, desire to live in the city and work.

No. 3. This boy was illiterate; always a poor pupil; when not content with his parents, he would leave them two or three months. He would go to the railroad station and open the doors of carriages; for this he always received something, sometimes as much as a dollar a day. He would sleep in empty cars or bags. He did not desire to go to school any more where he is ordered about, where the teacher is bad or untruthful, because he said it was very bad in prison; but he had been in a reformatory and knew that the teacher's statement was in all points inexact.

No. 4. This boy (10 years of age) had a number of signs of degeneration as in form of his ears, defective palate, teeth badly implanted. He was small for his age. He spent his time in the country with bad boys and declared he wanted to be an Indian and an assassin; the prospect of prison life or even the gallows did not frighten him. He was the son of an alcoholic.

No. 5. He was obviously a degenerate, 9 years old. His mother had four children, three of whom were born at the seventh month. He had convulsions and a violent temper. At 9 years of age he was vicious, and it was necessary to separate him from the others, whom he would strike or whose clothes he would tear; sometimes he would run into the class right in the midst of the lesson; he would imitate the movements of one swimming. During the night, when partially asleep, he would shake his head and would not awaken even if the wall was pounded upon.

No. 6. He had the typhoid fever and the convulsions when young; he invented unreasonable stories for the sole purpose of making others believe them. He simulated disease, and even pretended he tried to commit suicide. He stole from his employer, in small sums so that it was some time before he was discovered; he stole from his parents; one day he took a watch which he sold, spending the money stupidly. His conduct was very bad at school.

No. 7. She was a girl of 15; she would not stay at home; she would go out to the theater, to the concert; her dream was to hear Carmen, she was very coquettish and proud of her person, she desired to learn music. She was placed in a store and did well. It was only her home she did not like, and especially on Sunday.

No. 8. She was a vagabond; she stole by calculation, and because that brought her money. "I prefer," said she, "to gain four dollars a day instead of one." She considered this all right. Nothing seemed to her more natural than to have lovers, and she could not comprehend why this should be forbidden. She was the despair of her family, who were honest working people, whose other children conducted themselves rightly.

X.—A REFORMATORY AS A LABORATORY.

Since at least a majority of the inmates of a reformatory are normal, their crime being due rather to their unfortunate surroundings than to their inward natures, and since abnormal persons—that is, those positively abnormal in at least a few respects—are nevertheless normal in most things, whatever therefore may be found true of the inmates may be true to a large extent of all young persons brought up in similar conditions of life.

STUDY OF HUMANITY.

Thus the study of the inmates of a reformatory and the results of such investigation can be of use to the whole community, at whose expense the reformatory is supported. It is therefore not unjust or unreasonable to make the reformatory a humanitarian laboratory for purposes of study, provided no injury be done the inmates.

We desire to present the results of study of a reformatory,[a] with special reference to the previous family conditions of the inmates.

The special value of the investigation of a single reformatory lies in the probability that what is found true of the youth there confined is true in general of those confined in other reformatories.

DEFECTIVE FAMILY LIFE.

By examination of Table 1 it will be noted that 223 inmates have incomplete families; that is, they are deprived of father or mother, or of both parents. There are 18 whose fathers married again, and 18 cases in which the mother married again. A preference for children of first marriage is well known. Despised and maltreated, a child may leave home when it is the subject of dispute between its parents. Instead of trying to win the child, the stepmother may consider it fortunate to have got rid of the child, which is not hers, and which is an expense to rear. Thus cast into the street, the little unfortunate falls into bad surroundings, which soon bring it before the court.

The condition of the majority of these inmates is worse than that of orphans.

TABLE 1.—*Families of 385 young criminals.*

LEGITIMATE CHILDREN.		
Having father and mother		162
Father dead:		
Mother remains widow	42	
Mother remarries	18	
Mother lives in concubinage	6	
		66
Mother dead:		
Father remains widower	41	
Father is remarried	18	
Father lives in concubinage	2	
		61
Mother and father dead:		
Cared for by relatives	10	
Supported by charity	4	
Abandoned	8	
		22
Father separated from the family	21	
Mother separated from the family	5	
Both parents living in concubinage	6	
		32
Both parents having disappeared		3

[a] The data are given by Raux.

Those under brutal supervision preferred to remain in the reformatory rather than return to their parents. What blame can be attached to a child living under such conditions? As an illustration we will give the facts concerning one of the inmates.

CRUEL FAMILY CONDITIONS.

The father had married a second time. A child by the second marriage received all the favors of the mother. The child of the first marriage was slighted, scolded, and detested by his stepmother, who showed her aversion by prejudicing the father against his son, so that he received only reproaches and chastisement. Deprived of the necessities of life and harassed by ill treatment, he resorted to marauding, which only increased the father's anger. Often the child would not come home till very late at night. The parents, at the end of these escapades which they themselves provoked, used their ingenuity in devising punishment to subdue the young vagabond, sometimes suspending him by a rope and a pulley, raising him high and then letting him fall to the ground heavily; sometimes stripping and flogging him until blood was drawn. New punishments were invented in order to conquer the child, but it resulted only in further revolt. Finally the father, blinded by fury and incited by the stepmother, tried to strike his son with a hatchet, but was prevented by a neighbor who heard his screams. After this the boy left his parents; was without food and poorly clothed. He sought work everywhere, but in vain. After two days he was arrested for begging and sent to the reformatory.

The last was really the boy's only salvation; but who can reproach him? He had the misfortune to have a brutal father. Why, then, should he be called into court and be publicly branded as a criminal, even though the object of the arrest is educational correction? The public, who never heard of him until now, will always remember him as having been brought into court and sent to prison.

CHILDHOOD YIELDS MORE EASILY TO EVIL THAN GOOD.

It is sad to admit that of these 385 children only 13 per cent (51; Table 4) had received the care and affection they had a right to expect.

It seems rational that these 51 children should have become good citizens. They, however, did not fulfill the hopes of their parents. There is a tendency to believe that such children have inborn criminal instincts to such an extent as to predestine them to evil. A child's nature may be said to consist of instincts, predispositions, or faculties, etc., a bundle of intellectual and moral tendencies, which, developed in the good, are called "virtue," "good character," etc. The employment of these tendencies or forces—that is, habit—increases their power. But during infancy and childhood these forces offer little resistance to evil. It is for this reason that some children who seem to be following the right path suddenly depart from it and destroy the reputation their good conduct and qualities had made.

While unfavorable surroundings easily make a good child bad, with favorable surroundings it is much more difficult to make a bad child good. Vices seem to act like diseases. They take hold [illegible] but disappear slowly.

be proud of imitating its father. Sometimes the mother is an alcoholic, using improper language in the presence of the children. Other parents are incurably lazy, making their children beg, in order to support them, or causing them to earn a livelihood as early as possible at whatever will bring the greatest return, without regard to the pernicious influence of some classes of labor upon the mind and body of the child. Many children become conscious that they are simply the victims of the idleness of their parents and leave their so-called homes to shift for themselves, seeking new relations, which sooner or later may lead them into vagabondage and crime.

TABLE 3.—*Some sociolological conditions of families.*

Parents resided in cities	254
Parents resided in the country	131
Parents had resources other than the product of their labor	23
Parents lived exclusively on the product of their labor	256
Parents were deprived of all means of existence	87

The fact that only 23 had families in comfortable circumstances suggests how much the conduct of a child depends upon the well-being of the family; how much means sufficient to afford a child a good education is a great protection from vice.

The 256 whose parents lived exclusively from their own efforts consisted of day laborers. They live from hand to mouth; their wages are barely sufficient to support a family; frequently the mother is compelled to go out to work, leaving the children in the care of a neighbor or of the older children. Such long hours of absence of the parents weakens parental control; the children live more or less to themselves, and, like their parents, remain away from home and contract the habits of vagabondage.

In some families the father's employment is not regular; when out of work he frequents the saloon and spends his money, just at the time he needs it most for the necessities of life, often forcing his family into poverty, with all its accompanying temptations and evils.

The 87 whose parents are without means of subsistence include the most vile and corrupt, prostitute mothers, or mothers in concubinage, living in immorality or debauchery.

TABLE 4.—*Moral conditions in the family.*

			Per cent.
Those under good supervision		51	13
Those under feeble supervision	90		
Those under ineffectual supervision	44		
Those under brutal supervision	24		
		158	41
Those morally abandoned	98		
Those completely abandoned	47		
		145	38
Those incited to crime by example of parents	15		
Those committing crime under instigation of and complicity with their parents	16		
		31	8

Of the children in this reformatory, 158 (41 per cent) had received little or no care. Some, on the other hand, were indulged by their parents, being allowed to have their own way, often leaving home for purposes of marauding or vagabondage. These, 90 in all, were under feeble supervision.

If we add to these 125 the 138 whose conduct was bad, we have 263 fundamentally vicious, or two-thirds of the whole.

TABLE 7.—*Education of the inmates.*

		Per cent.
Illiterate	134	35
Knowing how to read	93	24
Knowing how to read and write	119	31
Knowing how to read and write and calculate	30	8
Possessing a good primary education	9	2

Most of the 134 illiterates come from 125 previously convicted and 145 abandoned children. The abandonment of a child almost always produces an habitual and ignorant criminal. The absence of all supervision leaves the child to its own instincts, which is to run in the streets and fields and not to go to school.

EDUCATION AND CRIME.

The lack of education is not the cause of crime, but is due mainly to bad social conditions, which are the cause of both ignorance and crime. Yet, notwithstanding this general truth, education doubtless tends to lessen crime. Good social conditions both lessen crime and increase education, so that the better educated children are the less criminal, but not on account of their education, as is sometimes claimed. Bad social conditions are the chief cause of crime.

TABLE 8.—*Divisions of crime.*

				Per cent.
CRIMES AGAINST THE PERSON.				
Murders, homicides	5			
Attempts to derail trains	2			
Assaults, wounds, injuries	13			
Violence toward officers of the law	6			
		26		
Violation and attempts at violation	6			
Crimes against decency	28			
Outrages against decency	13			
		47		
			73	19
CRIMES AGAINST PROPERTY.				
Theft, qualified, complicity in, attempts at	50			
Simple theft	169			
Fraudulent abstraction (of papers)	2			
Abuse of confidence	7			
Swindling and attempts at swindling	4			
Forgery	1			
Burglary	3			
Escape from prison	1			
			237	61
MIXED.				
Incendiaries	4			
Insurrection	3			
Vagabondage	56			
Begging	12			
			75	20

In general, children who commit grave crimes are less vicious than young vagabonds, for in violent or passionate natures where the crime, though grave, is nevertheless the result of temporary irritation or excitement, there is much more susceptibility to reform.

LENGTH OF SENTENCE.

The age of 20 is considered the most favorable time to send a young man from the reformatory, especially where his parents offer no guaranty to look after him. At this age he seems best fitted to enjoy liberty and to resist temptation. Premature liberations have proven disappointing.

LENGTH OF TIME SENTENCED.

Less than 2 years	3	
From 2 to 3 years	11	
From 3 to 4 years	13	
From 4 to 5 years	17	
From 5 to 6 years	42	
From 6 to 7 years	3	
From 7 to 8 years	6	
From 8 to 9 years	1	
From 9 to 10 years	1	
For 10 years	1	
For 15 years	1	
		99
Until 15 years of age	1	
Until 16 years of age	3	
Until 17 years of age	1	
Until 18 years of age	64	
Until 19 years of age	10	
Until 20 years of age	201	
Until 21 years of age	6	
		286

GENERAL CONCLUSION.

The inmates of this reformatory are much more unfortunate than guilty, coming from families the majority of which are of bad or very questionable morality and whose means of subsistence are either insufficient or wholly wanting. Disorganization of family, poverty, laziness, drunkenness, and debauch are the main causes of crime in the young.

XI.—STATISTICS OF CHILD SUICIDE.

The older writers scarcely mention child suicide. It was not until the nineteenth century that the matter was brought to the attention of the public.

FRANCE.

In the following table of official statistics [a] it will be seen that from 1839 to 1898 juvenile suicide increased in France.

The number of suicides given by the minister of justice is less than the reality, for parents are disposed to attribute the cause of death to some accident. Many attempts at suicide are not given truthfully to the police, parents and school-teachers alike being interested to conceal the facts. Even the police may abstain from reporting the truth in the cases where there is no suspicion of crime.

[a] Statistique du Ministre de la Justice, France.

TABLE I.

Years.	All suicides.	Children under 16.			Children from 16 to 21.		
		Total.	Boys.	Girls.	Total.	Boys.	Girls.
1839	2,752	20	16	4	132	80	52
1849	3,583	20	13	7	122	76	46
1859	3,899	16	16	.....	139	94	45
1869	5,114	37	.....	.....	168	.....	.....
1879	6,496	61	38	23	266	187	79
1889	8,180	56	.....	.....	392	242	150
1898	9,438	85	.....	.....	477	273	204

ENGLAND.

From Table II, giving English official statistics,[a] it will be seen that there has been a relative increase of suicide for both adults and children from 1861 to 1890.

From 1854 to 1856 there were in England, according to Griesinger,[b] 5,415 suicides, of which 33 were children under 10 years of age.

TABLE II.

[Per million inhabitants (England).]

10-year period.	All ages.			Ages 0–10.			Ages 0–15.		
	Male.	Female	All.	Boys.	Girls.	All.	Boys.	Girls.	All.
1861–1870	99	34	65	4	3	4	27	30	29
1871–1880	107	35	70	4	3	3	24	26	35
1881–1890	118	37	77	4	3	3	29	33	31

PRUSSIA.

In Prussia[c] from 1788 to 1797 there was only 1 case of child suicide reported; from 1798 to 1807 there were 3 cases; and from 1812 to 1821, 31 cases. These figures, taken in connection with the fact that from 1900 to 1903 1,700 children committed suicide, show an enormous increase.

In Berlin[d] from 1818 to 1824 there were 30 suicides under 20 years of age, 17 under 15, and 1 under 10 years of age.

TABLE III.

Berlin.	Age 0–10.	Age 0–15.	Age 0–20.	Berlin.	Age 0–10.	Age 0–15.	Age 0–20.
1818	1	1	4	1823	.....	4	3
1819	.....	2	8	1824	.....	3	6
1820	.....	4	4				
1821	.....	1	2	Total	1	17	30
1822	.....	1	3				

[a] Supplement to Fifty-fifth Annual Report of the Registrar-General.
[b] Die Pathologie und Therapie der psychischen Krankheiten, 1867.
[c] Casper, J. L., Beitraege zur medizinischen Statistik, etc.
[d] Baer, A., Der Selbstmord, 1901.

Table IV is derived from official sources,[a] and covers the period in Prussia from 1869 to 1898, and gives (1) the number of suicides for all ages, (2) the number up to 10 years of age, (3) the number from 10 to 15 years of age, (4) all up to 15 years of age, (5) the number from 15 to 20 years of age, (6) the number of suicides to one under 15 years of age, and (7) the number of inhabitants per suicide under 15 years of age. This table, which covers a somewhat long period, shows a general increase of suicide for all ages, except for children under 10 years.

The increase is relatively greater in the girls than boys, especially at ages 10 to 15. This increase may be due to a general tendency toward the independence of women, as indicated by young girls going out more into the world of employment. Thus they encounter in tender years special difficulties and hardships which overburden their nervous systems and produce a feeling of despair.

TABLE IV.

Year.	All suicides in Prussia.			Age, 0–10 years.			Age, 10–15 years.			Age, 0–15 years.		
	Male.	Female.	Total.	Boys.	Girls.	All.	Boys.	Girls.	All.	Boys.	Girls.	All.
1869	2,570	616	3,186	2	1	3	23	5	28	25	6	31
1870	2,334	629	2,963	3	.....	3	25	5	30	28	5	33
1871	2,183	540	2,723	1	1	2	24	7	31	25	8	33
1872	2,363	587	2,950	4	.....	4	38	3	41	42	3	45
1873	2,216	610	2,826	1	1	2	37	10	47	38	11	49
1874	2,527	548	3,075	4	.....	4	19	6	25	23	6	29
1875	2,683	595	3,278	.....	2	2	26	7	33	26	9	35
1876	3,189	728	3,917	3	1	4	39	6	45	42	7	49
1877	3,559	771	4,330	2	2	4	33	9	42	35	11	46
1878	3,827	862	4,689	3	1	4	37	14	51	40	15	55
1879	3,729	818	4,547	3	.....	3	34	8	42	37	8	45
1880	3,878	891	4,769	4	.....	4	49	18	67	53	18	71
1881	4,044	914	4,958	4	1	5	53	9	62	57	10	67
1882	4,112	960	5,072	5	1	6	48	11	59	53	12	65
1883	4,933	1,238	6,171	.....	.....	.....	53	23	76	53	23	76
1884	4,691	1,209	5,900	2	2	4	44	19	63	46	21	67
1885	4,811	1,217	6,028	2	1	3	35	10	45	37	11	48
1886	5,047	1,165	6,212	2	.....	2	40	11	51	42	11	53
1887	4,703	1,195	5,898	2	.....	2	37	14	51	39	14	53
1888	4,255	1,138	5,393	3	1	4	55	16	71	58	17	75
1889	4,430	1,185	5,615	1	1	2	49	8	57	50	9	59
1890	4,682	1,283	5,965	2	1	3	59	13	72	61	14	75
1891	4,931	1,269	6,200	1	1	2	64	15	79	65	16	81
1892	5,003	1,251	6,254	1	1	2	57	17	74	58	18	76
1893	5,135	1,274	6,409	4	1	5	49	14	63	53	15	68
1894	5,287	1,343	6,630	1	1	1	55	11	66	56	11	67
1895	4,896	1,278	6,174	4	.....	4	46	9	55	50	9	59
1896	5,073	1,424	6,497	2	.....	2	48	15	63	50	15	65
1897	5,117	1,379	6,496	4	.....	4	44	15	59	48	15	63
1898	5,058	1,303	6,361	3	.....	3	53	14	67	56	14	70
Total	121,266	30,220	151,486	73	20	93	1,273	342	1,615	1,346	362	1,708
Average	4,042.2	1,007.3	5,049.5	2.4	0.7	3.1	42.4	11.4	53.8	44.9	12.1	56.9

[a] Baer, A., Der Selbstmord, 1901.

TABLE IV—Continued.

Year.	Age, 15-20 years.			Number of suicides to one under 15 years.			Number (thousands) of inhabitants to one suicide under 15 years.		
	Boys.	Girls.	All.	Men.	Women.	All.	Male.	Female.	All.
1869	142	61	203	103	103	103	479.8	2,044.2	782.6
1870	126	59	185	83	126	90	431.8	2,478.9	742.0
1871	125	55	180	83	68	83	485.8	1,560.8	746.4
1872	130	57	187	56	196	66	290.4	4,184.1	550.0
1873	118	62	180	58	55	57	323.6	1,150.0	509.2
1874	144	54	198	110	91	106	540.6	2,131.2	869.6
1875	156	59	215	103	66	94	484.5	1,439.3	730.0
1876	168	54	222	76	104	80	304.0	1,876.4	528.6
1877	200	88	288	102	70	94	370.3	1,213.7	571.9
1878	212	87	299	96	58	85	328.0	901.0	484.3
1879	182	72	254	101	102	101	358.7	1,710.3	509.0
1880	193	95	288	73	50	67	252.5	767.8	363.2
1881	207	97	304	71	91	74	236.2	1,392.2	408.7
1882	258	104	362	78	80	78	255.5	1,668.4	424.0
1883	271	139	410	93	54	81	257.1	614.0	365.1
1884	233	128	361	102	58	88	298.2	667.8	417.2
1885	245	112	357	130	111	126	374.1	1,306.1	587.7
1886	212	114	326	120	106	117	332.7	1,319.1	537.4
1887	220	129	349	121	85	111	362.1	1,047.6	543.2
1888	235	125	360	73	67	72	246.5	873.0	388.5
1889	278	104	382	89	132	95	289.5	1,668.9	499.8
1890	237	146	383	77	92	79	240.0	1,084.8	397.7
1891	276	135	411	76	79	77	227.8	959.9	372.4
1892	337	143	480	86	69	82	258.1	826.7	401.3
1893	295	160	455	97	85	94	285.6	1,046.3	453.4
1894	330	157	487	94	122	99	273.8	1,444.6	466.0
1895	265	142	407	98	192	125	311.1	1,790.5	536.7
1896	283	161	444	101	95	100	315.8	1,090.3	494.5
1897	293	144	437	107	92	103	334.1	1,106.9	518.1
1898	283	145	428	90	93	91	290.9	1,204.6	473.8
Total	6,654	3,188	9,842	2,747	2,792	2,718	9,839.2	42,114.8	15,782.2
Average	221.8	106.3	328.1	91.2	93.1	90.6	328.0	1,403.8	526.1

CAUSES OF CHILD SUICIDE SPECIAL.

The general increase of all suicides does not correspond to that of child suicide in the same period. There seems to be no parallelism (see Table IV). This fact suggests that in the suicide of children the causes are not the same as in the case of adults.

General social conditions do not seem to influence the child, but his immediate surroundings have much effect upon his thought and feeling. If the family and school life go on without reference to the child's individuality and capability or in direct opposition to them, they may awaken in him a disposition to suicide.

BOYS AND GIRLS COMPARED.

In the thirty-year period (1869–1898) the yearly average (see Table IV) is 5,049.5. For the men it was 4,042.2, and for the women 1,007.3—that is, about 80 per cent men and 20 per cent women. Almost the same relation exists between the sexes and the whole population in the different age periods.

TABLE V.—*For every 100 suicides in whole population.*

Men	80.07
Women	19.22
Children up to 10 years:	
Boys	78.49
Girls	21.51

Children 10 to 15 years:
Boys..... 79.00
Girls..... 21.00
Children up to 15 years:
Boys..... 78.91
Girls..... 21.09
Youth 15 to 20 years:
Boys..... 67.68
Girls..... 32.32

But it will be noticed that this relation is changed in the case of youth from 15 to 20 years of age, where the per cent of boys is 67.68 and that of girls 32.32. This is at the age of puberty, when the life of youth is somewhat changed, affecting the girl apparently more than the boy.

As just indicated, Baer makes four-fifths of child suicides boys and one-fifth girls. Durand Fardel[a] records 17 boys to 7 girls. In Leipzig from 1882 to 1888 it was 1 girl to 9 boys. Guttstadt's statistics give 240 boys and 49 girls. Morselli gives the following table:

TABLE VI.—*For every 1,000,000 suicides.*

Country.	Year.	Boys.	Girls.	Country.	Year.	Boys.	Girls.
Sweden	1847–1855	3.5	0.9	France	1835–1844	2.2	1.2
Denmark	1865–1871	28.0	3.0	Do	1851–1860	3.6	1.6
Prussia	1869–1872	10.8	2.0	Austria	1852–1854	3.7	0.34
Do	1873–1875	10.5	3.2	Italy	1872–1876	3.2	1.0
Saxony	1847–1858	9.6	2.4	England	1861–1870	4.0	3.0
Belgium	1840–1849	1.5	0.0				

All these children were under 17, except in England, where the ages were from 10 to 15.

In Deutsch's[b] 200 cases there were 147 boys and 53 girls.

Thus suicide is more frequent among boys than girls. The struggle for existence is more acute for boys. The excessive ambition of parents affects the boys more than the girls.

AGES OF MOST SUICIDES FROM ELEVEN TO FIFTEEN.

Between the years of 11 and 15 most of the suicides of children take place. Before 11 years suicide is exceptional. Here the child plays murder or suicide, just as it plays "Indian."

In the beginning of the school year suicide is exceptional. The child starts out with hope. At the end of the school year vanity and fear of punishment may have produced their results.

METHOD OF SUICIDE.

Combining Sigert's cases with those of Deutsch, the methods of suicide are as follows:

TABLE VIII.

	Cases.		Cases.
Drowning	70	Hanging	45
Shooting	45	Poison	17
Sharp instruments	3	Being run over	11
Jumping from window	47	Unknown ways	14
Burning	1		

[a] Annales Med. Psych. 1, 1856.
[b] Archiv für Kinderheilkunde, 1903–4, Bd. 38, Seite 45.

ARGENTINE REPUBLIC.[a]

In 1899 there were 19 cases of suicide under 20 years of age, in 1900 20, and in 1901 30 cases, showing an increase. Whether there be an increase relative to the population is not stated.

CAUSES OF SUICIDE.

Deutsch found the causes of suicide in his 200 cases as follows:

TABLE VII.

Fear of punishment	58	Punishment	25
Bite of conscience	28	Love	11
Bad treatment	18	Homesickness	1
Sickness	12	Discontented with calling	5
Reading	2	Unknown causes	25
Sorrow	5		

[a] República Argentina Estadística, Annario, 1902.

PRUSSIA.

TABLE 9.—*Child suicides (979)—Causes and motives.*

	1884-1888.						1889-1893.						1894-1898.						Total.		
	Under 10.		10 to 15.		0 to 15.		Under 10.		10 to 15.		0 to 15.		Under 10.		10 to 15.		0 to 15.				
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	All.
Weariness of life	.....	.....	3	1	3	1	.....	.....	7	1	7	1	.....	.....	3	1	3	1	13	3	16
Physical suffering	.....	.....	2	2	2	2	.....	.....	5	.....	5	.....	1	.....	7	2	8	2	15	4	19
Insanity	1	.....	14	6	15	6	1	.....	22	4	23	4	1	.....	19	11	20	11	58	21	79
Passion, emotion	.....	.....	4	.....	4	.....	.....	.....	9	2	9	2	1	.....	6	1	7	1	20	3	23
Vice, crime	.....	.....	1	2	1	2	.....	.....	4	1	4	1	.....	.....	1	.....	1	.....	6	3	9
Sorrow, grief, care	.....	1	5	1	5	2	1	.....	5	1	6	1	.....	.....	3	.....	3	.....	14	3	17
Repentence, shame, bite of conscience	4	1	70	29	74	30	3	1	90	26	93	27	6	.....	80	20	86	20	253	77	330
Anger and strife	1	.....	22	3	23	3	.....	2	33	9	33	11	1	.....	17	11	18	11	74	25	99
Other causes	1	1	10	2	11	3	1	.....	9	1	10	1	.....	.....	9	2	9	2	30	6	36
Unknown causes	4	1	80	24	84	25	3	2	94	22	97	24	4	.....	101	16	105	16	286	65	351
Sums	11	4	211	70	222	74	9	5	278	67	287	72	14	.....	246	64	260	64	.....	.....	.....
Totals	15		281		296		14		345		359		14		310		324		979		

INFLUENCE OF ORGANIC DISEASE.

In suicide the individual often wavers. The least little circumstance may determine his act. Thus, a university student told the writer that she was about to shoot herself when a caller knocked on her door. If a temporary condition can so affect a mentally morbid state either for the better or worse, it is easy to see how any organic disease, drawing on the vitality continuously, or physical abnormality, might be the cause of suicide even in those of cheerful disposition. The presence then of any organic disease or other abnormalities revealed by an autopsy may be of significance in the investigation of suicide.

It will perhaps be of interest and value to give the general results of the comparatively few autopsies that have been made on suicides.

GENERAL CONCLUSIONS FROM AUTOPSIES.

From a study of the brains of suicides Schwenendik[a] concluded that the anomalies were of such importance as to make one regard these brains as irregular and abnormal.

SINGLE CASES.

Of the 105 autopsies on suicides described by Friedemann, 13 cases were due to fever, and 12 probably due to the same cause—that is, 25 per cent.

In 6 cases uremic delirium was one of the leading causes. In 1 case malnutrition of the gray substance in the right hemisphere, and the same in 1 case in the small brain. There were anomalies of development, especially in epileptics, idiots, and insane. There were 9 cases with chronic meningitis and 4 with chronic hydrocephalus, 3 with apoplectic basis and 3 with sclerosis of the arteries of the brain, 20 with hyperostosis of the skull. In 1 case phthisical insanity was the main cause; in 7 cases, syphilis. Defective heart valves were present in 4 cases, and hypertrophy of heart in 6, stomach catarrh was the cause in 1 case, and chronic alcoholism in 7 cases.

Man 50 years of age: A strong man committed suicide by potassium cyanide. He belonged to one of the best families. He had been operated upon for a rectal fistula, and the fear of a second operation was the only reason known for his taking his life.

The main interest in his brain was the rudimentary formation of the falx cerebri in connection with the asymmetrical arrangement of both frontal lobes. An arrest of development occurred which limited the growth of the remaining falx cerebri.

In connection with this anomaly is another peculiarity in that the left hemisphere was more developed than the right in this region.

Man 43 years old: The brain was peculiar in a number of ways. The large number of convolutions limited the size of the single gyri. Transverse and longitudinal convolutions were very unequally divided on both sides.

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[a] Untersuchungen an zehn Gehirnen. Verhandlungen der physikalischen Gesellschaft. 1881.

Out of the 105 cases studied by Friedemann, 17 are given as examples.[a] The youngest individuals have been selected:

Tailoress, 18 years of age: Poisoned by phosphorus (June); scrofula, cicatrices, and calcareous degeneration of left lung; club foot on the left; ascaris and oxyuris. She was probably not accountable.

Store girl, 24 years of age: Hanging (September); calcareous nodes of the apex of the lungs, splenic infarction, incipient chronic endarteritis of the aorta and carotids.

Servant girl: Oxalic acid (April); spleen small and flabby, heart flaccid, valves normal, ovaries large, a cyst in one, the size of a cherry; on the surface of one was a small pigmented cicatrix, uterus small.

Servant, 22 years old: Drowning (July, 12 o'clock at night); residuum of a former pleurisy and pericarditis; uterus with 6 to 7 month-old child; hyperphasia of the liver, spleen, kidneys, and supra-renal glands; hyperæmia of contents of skull. She was probably irresponsible.

Girl, 9 years of age: Hanging (March); traces of endarteritis of the aorta; trichocephalus, oxyuris, ascaris, extensive swelling of the follicles and of the peyers glands near the iliocaecal valve; slight swelling of the follicles of the large intestines; slight swelling of the mesentary glands; typhoid. She was irresponsible.

Girl (puella publica): Drowning (December); hyperæmia of the brain, menstrual uterus, extensive residuum from perimetritis; obliteration of the right tube, smell of alcohol in the body; chronic catarrh of large intestine. She was probably irresponsible.

Girl, 23 years old (puella publica): Phosphorus (March); compression of the lower lobes of the lungs, absence of the middle lobe; menstrual condition of uterus and ovaries.

Servant girl, 21 years of age: Hanging (September); pleuritic adhesions on the right side; large swelling of follicles in stomach and intestine; slight swelling of the mesentary glands; vaginal catarrh, hyperæmia of the urethra; typhoid in beginning. She was irresponsible.

Store clerk, 19 years old: Shooting (October); defect of sphenoid bone; very strong thymus; thyroid process enlarged on left side; ascaris; probably syphilophobia.

Sailor, 22 years old: Shooting (June); absence of middle commissure; many miliary tubercles and several nodes, indurated, with central caseous condition in the left lung; fresh circumscribed groups of tubercles at apex of right lung with hyperæmia of surrounding tissue; large hardened liver with petrified pentastomum; chronic meningitis. He was probably irresponsible.

Gold worker, 21 years old: Cyanide of potassium (June); flabby heart; healed abscess of the duodenum; deep scar of the right lobe of the liver. He probably suffered with syphilis.

Farmer, 22 years old: Shooting (May); bad digestive condition of stomach and intestines. He suffered with syphilis, very probably.

Servant girl, 17 years old: Drowning (December); recent endocarditis, upon a past mitralis; hyperæmia of the head and contents of skull; hyperæmia of thyroid gland, liver, and kidneys; swelling and hyperæmia of the spleen and genital organs; great swelling of the tonsils with collection of pus; severe stomach catarrh; hyperplasia of the endometrium; scarlet fever, probably. She was irresponsible.

Milliner, 22 years old: Shooting (June); extreme deformity of both suprarenal glands; fatty liver; tonsilitis on both sides; swelling of spleen; menstrual uterus, no hymen; probably scarlet fever. She was irresponsible.

Student of philosophy, 25 years old: Hanging (August); hyperostosis of the skull; whitish trübung of the arachnoidea; residuum of acute meningitis. He was irresponsible.

Servant girl, 20 years old: Hanging (December); ovaries with very large follicles; hyperæmia and thickening of the mucous membrane of the uterus; anteflexion of uterus; thickening and osteosclerosis of the skull; sclerotic center with large petrified nerve fibers in the right hemisphere; ascaris tricocephalus, oxyuris. She was not responsible.

Waiter, 20 years of age: Shooting (March); large cavern in upper left lobe with indurated thickening of the surrounding tissue, confluent tuberculosis and recent pleurisy, slight tuberculosis of the pleura of the left upper lobe; hyperæmia of heart, lungs, and abdominal viscera; numerous hyperæmic points in liver; recent enlargement of spleen; acute miliary tuberculosis very probable. He was irresponsible.

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[a] Friedemann, I. H., Pathologish-anatomische Befunde bei Selbstmördorn, Kiel, 1890.

XIII.—STATISTICS OF JUVENILE CRIME.

It is sometimes said that the increase in crime at present so generally established by statistics in most all countries is due to the fact that more criminal acts are taken cognizance of and recorded than formerly. While there may be some truth in this statement, it is no answer to the general agreement of statistics in so many different countries. In some countries during the last ten years the laws have had little or no change.

On the other hand, where the laws have been changed, there has been a tendency in some instances to laxity rather than severity, where, as in the case of France, there was statistically a decrease in juvenile crime for a certain period, but in all probability there was an actual increase, for it was found that by the change of law, certain cases formally recorded as criminal, had for other reasons not been enrolled in the official records. (See G. Tarde, "Revue Pénitentiaire" for 1900.)

In a Senate document[a] the writer has given the official statistics of leading nations, showing for the last thirty years a general increase in crime, suicide, insanity, and other forms of abnormality.

From an examination of the tables which follow, it will be seen that likewise there has been an increase of juvenile crime except in a few countries. In many countries the data as to juvenile crime have not been collected.

GERMANY.[b]

TABLE 1.—*Number convicted for every 100,000 children from 12 to 18 years of age.*

Year.	Number.	Year.	Number.
1882	568	1893	686
1883	549	1894	716
1884	578	1895	702
1885	560	1896	702
1886	565	1897	702
1887	576	1898	744
1888	563	1899	733
1889	614	1900	745
1890	663	1901	739
1891	672	1898–1901	740
1892	729		

Table 1 shows on the whole an increase of crime relative to number of children from 1882 to 1901.

[a] Statistics of crime, suicide, and insanity. Senate Document No. 12, Fifty-eighth Congress, special session.

[b] Statistik des deutschen Reichs. Neue Folge, Band 146.

INCREASE OF HABITUAL CRIME.

TABLE 2.—*For every 100,000 children, 12 to 18 years of age.*

Year.	Number convicted.			
	Once.	Twice.	Three to five times.	Six or more times
1889	58	20	14	1.1
1890	67	24	15	1.1
1891	70	26	16	1.4
1892	76	29	19	1.7
1893	72	26	19	2.0
1894	79	29	22	2.7
1895	78	29	22	2.4
1896	77	28	24	2.9
1897	80	27	21	2.9
1898	83	30	23	2.9
1899	85	29	21	2.7
1900	82	30	23	3.2
1901	81	29	22	2.9

Table 2 indicates an increased tendency to habitual crime among the young.

CONTRAST BETWEEN CRIMES AGAINST PROPERTY AND PERSON.

TABLE 3.—*For every 100,000 youth 12 to 18 years of age.*

Year.	Theft.		Assault on person.	
	Previously convicted.	Not previously convicted.	Previously convicted.	Not previously convicted.
1889	59	282	8.4	76.1
1890	68	293	10.2	83.6
1891	69	293	11.1	85.1
1892	79	318	11.3	90.8
1893	69	274	13.8	98.4
1894	78	282	15.2	98.7
1895	74	272	15.1	104.5
1896	72	268	17.8	105.5
1897	72	277	18.3	98.4
1898	78	289	17.4	109.7
1900	75	286	19.4	113.6
1901	74	280	19.6	116.2
1889–1897 (average)	71	284	13.5	93.5
Increase (+) or decrease (−)	+4	−1.5	+5.5	+19.4
1898–1901 (average)	75	282.5	19.0	112.9

An examination of this table shows that in theft a repetition of the crime is greater than in crime against the person. With a marked increase of assaults on the person goes naturally an increase of first offenders, as seen by comparing the periods 1889–1897 and 1898–1901, where in the latter period there is 19.4 more first offenders per 100,000 from 12 to 18. A general reason for greater repetition of theft is that there is less opposition to meet with than in assault. "Once a thief, always a thief," is a general truth. The habit of theft is easily formed. A habit of homicide could hardly be possible.

TABLE 4.—*For every 100,000 children of corresponding ages there were convicted for the years 1894 to 1901:*

Year.	12 to 14 years.	14 to 18 years.	18 years or more.
1894	416	911	1,298
1895	392	901	1,304
1896	396	897	1,299
1897	411	894	1,309
1898	464	937	1,317
1899	462	920	1,295
1900	489	926	1,247
1901	451	939	1,322
1894-1901	435	916	1,299

Comparing (Table 4) the relative number of convicted children from 12 to 14 years of age with children of greater age, it will be seen that the relative amount of crime increases with age among the young.

TABLE 5.—*For every 100,000 persons of corresponding age there were convicted in years 1894–1901.*

	12 to 14 years.	14 to 18 years.	18 years and more.
Theft	294	402	231
Damaging property	31	57	47
Assault	31	190	355
Receiving stolen goods	19	23	23
Embezzlement	14	45	56
Fraud, treachery, etc	11	43	75
Crime against morality	8	31	31
Dangerous crime	6	10	12
Violation of game laws, etc	5	13	30
Disturbance of the peace	4	22	65
Counterfeiting	4	14	15
Insult and false accusation, libeling of officials	3	29	173
Resistance of officer, violence, and threats	1.6	21	103
Crime against industry	1.6	6	56
Robbery and extortion	1.5	2.5	3.1
Crime against life—homicide, murder, etc	.4	2.4	4.6
Crime against religion	.3	1.1	1
Crime against the Government	.01	.5	4.4

From Table 5 it will be seen that with children 12 to 14 years of age more than two-thirds of their crime (67.6 per cent) is theft, while in older children 14 to 18, it is 43.9 per cent., and in those 18 or more years of age, it is 17.8 per cent. Theft is most frequent in young criminals from ages 14 to 18.

From Table 6 it will be seen that in children from 12 to 14 years of age there is an increase in practically all forms of crime. In children from 14 to 18 the results are not quite so unfavorable, there being a decrease in theft and crime against morality.

TABLE 6.—*Number convicted for every 100,000 inhabitants of corresponding ages.*

	Ages 12–14.			Ages 14–18.			Ages 18 and more.		
		1898–1901.			1898–1901.			1898–1901.	
	1894–1897.	More (+) or less (−) than 1894–1897.	In general.	1894–1897.	More (+) or less (−) than 1894–1897.	In general.	1894–1897.	More (+) or less (−) than 1894–1897.	In general.
Theft	274.0	+41.0	315.0	404.3	−5.0	399.3	235.6	−8.6	227.0
Assault	28.8	+4.4	33.2	179.0	+22.4	201.4	348.5	+3.8	362.3
Destruction of property	29.2	+4.0	33.2	54.7	+3.9	58.6	47.0	+1.0	48.0
Embezzlement	12.1	+3.3	15.4	45.2	.....	46.2	55.6	+0.2	55.8
Dangerous crime, as incendiarism	4.7	+3.2	7.9	8.5	+2.9	11.4	10.0	+3.5	13.5
Receiving stolen goods	17.6	+2.4	20.0	22.2	+0.8	23.0	23.7	+2.0	21.7
Fraud, treachery, etc	9.7	+1.7	11.4	42.1	+1.8	43.9	74.2	+2.6	76.8
Crime against morality	7.5	+1.5	9.0	31.9	−1.5	30.4	30.0	+1.6	31.6
Disturbance of the peace	3.5	+0.9	4.4	20.6	+3.3	23.9	64.6	+1.8	66.4
Counterfeiting	3.4	+0.9	4.3	13.4	+1.6	15.0	14.7	.....	14.7
Robbery and extortion	1.3	+0.4	1.7	2.5	.....	2.5	3.1	−0.1	3.0
Crime against religion	0.26	+0.03	0.29	1.1	.....	1.1	1.1	−0.2	0.9
Crime against Government	.....	+0.02	0.02	0.5	.....	0.5	4.8	−0.8	4.0
Crime against life, homicide, murder, etc	0.38	+0.01	0.39	2.1	+0.5	2.6	4.7	−0.2	4.5
Insult, libelling of officials, etc	3.3	.....	3.3	29.2	+0.5	29.7	177.1	−7.6	169.5
Resistance of officer, violence and threats	.....	.....	.....	21.0	+0.3	21.3	104.6	−4.0	100.6
Violation of game laws, etc	5.0	−0.5	4.5	13.9	−2.0	11.9	34.9	−10.1	24.8
Crime against industry	1.9	−0.7	1.2	6.2	−0.5	5.7	54.5	+2.7	57.2

FRANCE.

Comparing the girls (Table 7) with the boys in French reformatories as to their motives for crime, we find that the girls commit relatively three times as much crime against morality as the boys, illustrating the fact that when woman goes wrong in any way, she usually loses her virtue in addition.

Girls exceed the boys relatively to their numbers in begging, disobedience to parents, vagabondage, incendiary, and qualified theft, while in assassination, murder, assault, and simple theft the boys exceed.

As to education the boys are superior to the girls.

TABLE 7.—*French reformatories for 1902.*

	Boys.		Girls.	
	No.	Per cent.	No.	Per cent.
MOTIVES.				
Assassination, poisoning	7	0.22	.....	.....
Murder, assault	103	3.24	9	1.60
Incendiary	47	1.48	10	1.78
Rape, crimes against morality	93	2.92	53	9.46
Theft, qualified	60	1.89	21	3.73
Theft, simple	2,999	72.25	250	44.57
Begging	95	2.98	38	6.77
Vagabondage	343	10.78	99	17.65
Other crimes	134	4.21	58	10.34
Disobedience of parents	1	.05	23	4.10
Total	3,182	100.00	561	100.00
AGE.				
7 years or less	25	.80	2	.36
8 to 9 years old	217	6.82	19	3.39
10 to 11 years old	607	19.08	82	14.62
12 to 13 years old	1,003	32.46	168	29.94
14 to 15 years old	746	23.44	171	30.48
More than 15 and less than 16	544	17.10	119	21.21
More than 16	10	.30	.....	.....
Total	3,182	100.00	561	100.00
EDUCATION.				
Illiterate	1,110	34.90	304	54.18
Knowing how to read	323	10.16	59	10.54
Knowing how to read and write	831	26.20	127	22.64
Knowing how to read and write and calculate	775	24.35	60	10.68
With primary education	140	4.40	11	1.96
Superior education	.....	.....	.....	.....
Total	3,182	100.00	561	100.00

TABLE 8.—*Inmates in reformatories of France.*[a]

Year.	Boys.	Girls.	Year.	Boys.	Girls.
1881	6,777	1,637	1893	5,405	1,176
1882	6,256	1,545	1894	5,388	1,131
1883	6,373	1,501	1895	5,235	1,152
1884	5,661	1,318	1896	5,023	1,095
1885	5,359	1,221	1897	4,901	1,016
1886	4,974	1,125	1898	4,535	979
1887	4,725	938	1899	4,037	884
1888	4,941	1,001	1900	3,828	771
1889	4,845	1,040	1901	3,568	690
1890	5,020	1,059	1902	3,182	561
1891	5,299	1,135	1903	2,897	468
1892	5,369	1,101			

[a] Annuaire Statistique, Paris, 1905.

TABLE 9.—*Treatment of minors in France.*

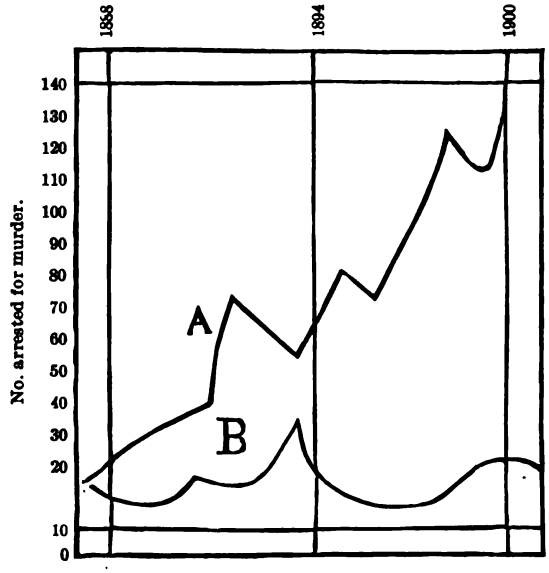
	1898.	1899.	1900.	1901.
Acquitted	392	305	337	344
Returned to parents	2,790	2,814	2,598	2,382
Under charge of a prison	16	18	9	10
In an institution	42	57	69	82
Under public charge	139	277	229	276
Sentenced one year or less	75	44	35	16
Sentenced more than one year	1,179	1,050	935	796
Acted with discernment	1,176	1,043	1,090	1,073

JUVENILE CRIME IN FRANCE.

The figures in Table X show the increase of juvenile crime. This table indicates the number of persons committed by the police courts from 1888 to 1900. The different motives indicating the kinds of crime are 18 in number. Two divisions are made—first, those under 16 years of age; and, second, those from 16 to 20 years of age.

According to official statistics of France adult criminality has not increased very much.

That the crimes of blood have increased very much among the young is brought out clearly by the following diagram. In thirteen years juvenile murder has increased from 21 to 140 cases.



A—Juvenile murder (age 16–20).
B—Adult murder (age 31–35.)

According to the official statistics of France, juvenile murder from 1888 to 1900 has become six times more frequent than adult criminality, which has remained about the same as indicated in diagram. In the opinion of Garnier[a] the adolescent criminal often has alcoholic parents, or those addicted to absinthe, making the surroundings of the young the worst possible, so that this enormous increase has a close causal relation with the increase of alcoholism.

[a] La Criminalité Juvénile. Arch. d'Anthrop. crim. 1901.

TABLE X.—*Motives in those convicted by the police court.*

	1888.		1889.		1890.		1891.		1892.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Abuse of confidence:										
Under age 16	4	.....	10	1	9	.....	10	.....	3	.....
Ages 16 to 20	54	7	66	6	74	7	81	1	70	7
Assassination or attempts at same:										
Under age 16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ages 16 to 20	3	1	14	1	9	5	9	.....	6	.....
Attacks at night:										
Under age 16	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Ages 16 to 20	49	1	75	3	37	.....	29	1	40	3
Robbery:										
Under age 16	4	.....	5	.....	5	.....	2	.....	6	.....
Ages 16 to 20	28	.....	30	.....	44	3	23	1	51	2
Assault:										
Under age 16	6	.....	3	.....	5	.....	2	1	8	.....
Ages 16 to 20	262	15	237	19	277	14	266	12	329	21
Swindling:										
Under age 16	3	1	4	.....	6	.....	5	1	3	1
Ages 16 to 20	96	7	89	9	223	18	181	14	99	12
Counterfeiting:										
Under age 16	3	1	.....	.....	.....	.....	2	.....	1	1
Ages 16 to 20	9	2	21	2	24	4	30	3	9	1
Forgery:										
Ages 16 to 20	4	4	15	1	8	3	5	.....	7	.....
Picking pockets:										
Under age 16	1	.....	12	.....	1	.....	2	.....	5	2
Ages 16 to 20	117	17	287	10	151	13	242	9	133	16
Incendiarism:										
Under age 16	.....	.....	1	.....	.....	.....	7	.....	3	.....
Ages 16 to 20	1	.....	2	.....	.....	1	2	.....	.....	.....
Threatening of death:										
Under age 16	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Ages 16 to 20	15	.....	7	.....	13	.....	31	.....	24	1
Murder or attempts at same:										
Under age 16	1	.....	.....	.....	1	.....	2	.....	3	.....
Ages 16 to 20	20	.....	35	1	40	.....	40	1	72	5
Against public decency:										
Under age 16	3	3	4	4	5	6	4	1	5	.....
Ages 16 to 20	61	10	84	23	86	22	59	19	59	17
Carrying concealed weapons:										
Under age 16	1	.....	.....	.....	.....	.....	1	.....	.....	.....
Ages 16 to 20	15	2	20	2	7	.....	9	1	23	.....
Rebellion, outrage against agents:										
Under age 16	17	1	18	3	12	.....	6	1	7	1
Ages 16 to 20	570	50	661	60	625	56	733	56	528	57
Vagabondage (soutenowis):										
Under age 16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ages 16 to 20	31	.....	51	.....	60	.....	106	.....	25	.....
Violation, attempts at same:										
Under age 16	.....	.....	1	.....	1	.....	2	.....	1	.....
Ages 16 to 20	7	1	13	.....	19	1	18	.....	20	.....
Theft:										
Under age 16	349	30	422	34	367	34	357	30	281	32
Ages 16 to 20	2,123	260	2,322	334	2,689	382	2,677	379	274	365

TABLE X.—*Motives in those convicted by the police court*—Continued.

	1893.		1894.		1895.		1896.		1897.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Abuse of confidence:										
Under age 16	6	.....	11	1	12	1	19	1	16	.....
Ages 16 to 20	80	6	94	8	110	3	106	3	90	4
Assassination or attempts at same:										
Under age 16	1	.....	.....	.....	.....	.....	1	.....	.....	.....
Ages 16 to 20	9	1	10	4	16	.....	16	1	9	3
Attacks at night:										
Under age 16	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Ages 16 to 20	37	.....	14	.....	17	1	15	.....	15	.....
Robbery:										
Under age 16	1	.....	3	.....	5	.....	6	.....	6	.....
Ages 16 to 20	65	1	41	1	49	.....	31	2	57	2
Assault:										
Under age 16	6	.....	12	1	15	1	20	3	22	1
Ages 16 to 20	295	21	296	12	371	6	431	8	403	26
Swindling:										
Under age 16	4	.....	3	1	3	.....	4	1	10	3
Ages 16 to 20	56	6	96	3	72	15	108	7	96	5
Counterfeiting:										
Under age 16	.....	.....	.....	.....	.....	.....	1	3	.....	.....
Ages 16 to 20	14	1	8	1	7	2	12	5	4	1
Forgery:										
Under age 16	.....	.....	1	.....	1	.....	2	2	2	.....
Ages 16 to 20	6	2	5	.....	12	1	13	3	9	2
Picking pockets:										
Under age 16	5	.....	4	.....	4	1	7	.....	4	4
Ages 16 to 20	233	13	185	8	128	7	123	7	163	6
Incendiarism:										
Under age 16	.....	.....	2	.....	1	.....	1	1	.....	.....
Ages 16 to 20	16	1	7	1	.....	1	.....	.....	2	.....
Threatening of death:										
Under age 16	.....	.....	1	.....	1	.....	2	.....	.....	.....
Ages 16 to 20	21	.....	29	1	47	1	42	4	37	1
Murder or attempts at same:										
Under age 16	2	.....	1	1	3	.....	3	.....	3	.....
Ages 16 to 20	58	7	52	5	73	10	59	8	84	7
Against public decency:										
Under age 16	2	3	7	11	5	1	12	3	6	4
Ages 16 to 20	58	10	63	16	46	11	51	14	36	12
Carrying concealed weapons:										
Under age 16	3	.....	1	.....	.....	.....	4	.....	.....	.....
Ages 16 to 20	61	.....	34	1	39	1	39	2	42	.....
Rebellion, outrage against agents:										
Under age 16	16	4	19	3	13	1	13	.....	7	.....
Ages 16 to 20	586	54	639	63	530	47	482	45	257	109
Vagabondage (soutenowis):										
Under age 16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Age 16 to 20	80	.....	107	.....	85	.....	72	.....	87	.....
Violation, attempts at same:										
Under age 16	.....	.....	1	.....	4	.....	2	.....	4	.....
Ages 16 to 20	36	2	26	1	33	1	14	.....	22	.....
Theft:										
Under age 16	363	36	425	46	351	23	472	35	381	45
Ages 16 to 20	2,148	278	2,269	398	1,732	411	1,607	339	1,924	337

TABLE X.—*Motives in those convicted by the police court*—Continued.

	1898.		1899.		1900.		Total.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Abuse of confidence:								
Under age 16	11	3	15	2	12	3	133	12
Ages 16 to 20	85	5	105	12	112	6	1,127	82
Assassination or attempts at same:								
Under age 16	.....	.....	.....	.....	1	.....	3	1
Ages 16 to 20	9	1	10	1	13	.....	133	18
Attacks at night:								
Under age 16	2	.....	.....	1	1	.....	5	2
Ages 16 to 20	32	2	30	3	23	2	521	16
Robbery:								
Under age 16	2	.....	3	.....	4	.....	52	.....
Ages 16 to 20	38	.....	45	.....	34	.....	536	13
Assault:								
Under age 16	13	2	17	1	11	4	140	14
Ages 16 to 20	324	28	437	49	465	52	4,363	313
Swindling:								
Under age 16	6	.....	4	5	.....	.....	55	13
Ages 16 to 20	50	8	97	9	71	2	1,307	115
Counterfeiting:								
Under age 16	.....	.....	1	.....	.....	.....	3	6
Ages 16 to 20	2	2	7	2	12	1	159	27
Forgery:								
Under age 16	.....	.....	2	.....	1	1	9	3
Ages 16 to 20	18	3	21	1	8	2	131	22
Picking pockets:								
Under age 16	16	2	11	.....	11	1	83	10
Ages 16 to 20	212	10	278	12	203	7	2,455	135
Incendiarism:								
Under age 16	3	.....	2	.....	3	.....	16	1
Ages 16 to 20	4	1	2	.....	3	.....	27	5
Threatening of death:								
Under age 16	1	.....	1	.....	.....	.....	6	.....
Ages 16 to 20	59	3	54	5	59	3	438	19
Murder or attempts at same:								
Under age 16	12	1	2	.....	2	.....	35	2
Ages 16 to 20	119	9	97	6	130	8	879	67
Against public decency:								
Under age 16	3	3	5	.....	7	2	68	41
Ages 16 to 20	52	12	43	8	61	8	650	184
Carrying concealed weapons:								
Under age 16	1	.....	.....	.....	7	.....	18	.....
Ages 16 to 20	59	.....	74	.....	153	2	566	11
Rebellion, outrage against agents:								
Under age 16	13	1	22	2	8	2	171	19
Ages 16 to 20	294	69	401	70	300	73	6,699	809
Vagabondage (soutenowis):								
Under age 16	1	.....	.....	.....	.....	.....	1	.....
Ages 16 to 20	53	.....	31	.....	76	.....	834	.....
Violation, attempts at same:								
Under age 16	3	.....	2	.....	1	.....	21	.....
Ages 16 to 20	24	.....	30	.....	21	.....	292	6
Theft:								
Under age 16	399	41	367	44	348	22	4,379	452
Ages 16 to 20	2,299	365	2,330	380	2,420	377	29,285	4,605

Table 11 shows a large increase of crime in minors in France from 1831 to 1900.

TABLE 11.—*Minors (16 to 21) convicted of crime in France.*

1831-1835	5,833
1836-1840	7,677
1876-1880	20,490
1881-1900	26,551

ITALY.

Table 12 indicates a slight increase in juvenile crime in Italy from 1890 to 1898, showing the per cent of the convicted for all less than 18 years of age and for all from 18 to 21.[a]

[a] Annuario Statistico Italiani, 1904, Roma.

TABLE 12.

Year.	Less than 18 years.		Age 18 to 21.	
	Number.	Per cent of convicted.	Number.	Per cent of convicted.
1890	15,128	11.54	14,980	11.42
1891	17,892	12.45	16,166	11.25
1892	17,306	11.61	16,896	11.34
1893	16,006	11.30	15,800	11.16
1894	17,786	11.75	17,826	11.77
1895	19,494	11.61	19,615	11.67
1896	21,246	12.14	20,359	11.64
1897	21,384	12.63	18,304	10.81
1898	24,392	13.13	19,780	10.65

BELGIUM.

The following table gives the number of those convicted proportionally to the number for each age:[a]

TABLE 13.

Age.	Boys per 1,000.		Girls per 1,000.		Per 1,000.		Per 1,000.		Per 1,000.	
					Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
	1899.	1900.	1899.	1900.	1901.		1902.		1903.	
Under 16	3.5	3.6	3.1	3.0	2.9	2.0	3.0	1.0	2.5	2.1
16 to 18	49.3	50.8	54.8	53.1	48.2	52.2	51.4	50.2	46.4	47.3
18 to 21	142.6	146.5	88.6	99.8	145.8	99.8	145.3	95.8	141.9	97.2

TABLE 14.[b]

Convicted.	Male.			Female.		
	Under 16 years.	16 to 18 years.	18 to 21 years.	Under 16 years.	16 to 18 years.	18 to 21 years.
1902.						
First offenders	120	2,011	4,630	13	646	1,096
Recidivists	13	246	1,758	1	49	229
Total	133	2,257	6,388	14	695	1,325
1903.						
First offenders	105	1,744	4,267	28	582	1,052
Recidivists	2	212	1,713	.....	40	227
Total	107	1,956	5,980	28	622	1,279

Age.	Distribution per 1,000 men.		Distribution per 1,000 women.	
	1902.	1903.	1902.	1903.
Less than 16	3.0	2.5	1.0	2.1
16 to 18	51.4	46.4	50.2	47.3
18 to 21	145.5	141.9	95.8	97.2

Age (1900–1901.)	Male—Number per 1,000 of corresponding age of masculine population.			Female—Number per 1,000 of corresponding age of feminine population.		
	First offenders.	Recidivists.	All.	First offenders.	Recidivists.	All.
16 to 18	13.4	1.6	15.0	4.5	0.3	4.8
18 to 21	22.0	8.9	30.9	5.4	1.2	6.6

[a] Statistique Judiciaire de la Belgique, 1902, 1903, 1905.
[b] Statistique Judiciaire de la Belgique, 1905.

SWITZERLAND.

Table 15 shows that in the institutions of Switzerland for the reform and care of delinquent and dependent children for the years 1881 to 1892 the number of boys who were inmates has been somewhat constant, while that of the girls has increased.

TABLE 15.—*In institutions for dependent and delinquent children, 1881 to 1892.*

	Boys.	Girls.	All.		Boys.	Girls.	All.
1881	833	191	1,024	1887	845	254	1,099
1882	878	207	1,085	1888	853	247	1,100
1883	866	228	1,094	1889	847	250	1,097
1884	863	246	1,109	1890	868	253	1,121
1885	830	252	1,082	1891	896	262	1,158
1886	819	250	1,069	1892	921	280	1,201

AUSTRIA.

TABLE 16.—*Children 14 to 20 years of age in Austria were convicted for the years 1902 and 1903 as follows:*

	1902.	1903.		1902.	1903.
Refractoriness	253	259	Fraud	446	443
Severe assault	682	734	Criminal lewdness	469	429
Theft	4,234	4,037			

GREAT BRITAIN.

TABLE 17.—*Children and young persons convicted of indictable offenses.*[a]

Year.	12 to 16 years.	16 to 21 years.	Year.	12 to 16 years.	16 to 21 years.
1894	6,604	9,568	1899	5,715	7,592
1895	5,330	8,634	1900	6,550	8,046
1896	5,773	7,834	1901	6,185	8,468
1897	5,625	8,063	1902	6,243	8,584
1898	6,104	8,489			

[a] Reformatory *v.* Industrial Schools of Great Britain, London, 1904 (official report).

The English statistician says that as a measure of juvenile crime this table does not show any alarming tendency to increase. Whether there be a relative increase or not does not appear in the official report.

CANADA.[a]

Table 18 shows a general increase in juvenile crime within the last ten years, from 1893 to 1903, but whether there be a relative increase or not does not appear in the official records.

TABLE 18.—*Convicted for indictable offenses.*

Year.	Under 16 years.	16 to 21 years.	Year.	Under 16 years.	16 to 21 years.
1893	668	768	1899	936	981
1894	687	1,002	1900	915	950
1895	790	906	1901	1,017	882
1896	660	889	1902	859	955
1897	723	936	1903	1,038	991
1898	836	1,022			

[a] The Statistical Yearbook of Canada, 1904, Ottawa, 1905.

TABLE 19.—*Number in penitentiaries, 1901 to 1904.*

Age.	1901–2.	1902–3.	1903–4.
Under 20 years	134	156	161

Table shows a general increase in young criminals in the Canadian penitentiaries from 1901 to 1904.

AUSTRALIAN STATES.

Number of prisoners under 21 years.

New Zealand.	1902.	1903.
Male	104	116
Female	5	10

TABLE 20.—*Number of criminal charges per 10,000 against persons arrested.*

Ages.	1871.	1881.	1891.	1901.
Males:				
10 to 15 years	104	111	96	51
15 to 20 years	338	335	305	209
Females:				
10 to 15 years	37	26	15	15
15 to 20 years	80	90	50	28

This table, taken from the Victorian Year Book for 1904, shows a decrease in crime among the young.

BUENOS AIRES.

TABLE 21.—*Age of criminals arrested from 1895 to 1904 in the city of Buenos Aires.*[a]

Crime.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.
Under 16 years	251	334	406	431	387	352	551	471	379	369
16 to 20 years	711	734	958	817	737	752	854	966	857	975

[a] Republica Argentina Estadistica anuario, Buenos Aires, 1905.

This table indicates an absolute increase of juvenile crime in Buenos Aires. Figures as to relative increase are not given.

BRITISH INDIA.

TABLE 25.—*Number of young convicts under 16 in British India admitted into the jails.*

	1900.	1901.	1902.	1903.	1904.
Boys	2,163	1,678	1,608	1,154	1,261
Girls	606	482	506	296	315

This table shows a decrease in juvenile crime in British India from 1900 to 1904.

TABLE 26.—*Reformatory schools in British India.*[a]

	1900.	1901.	1902.	1903.	1904.
Number of pupils admitted	345	282	311	251	245
Number able to read	30	23	80	71	91
Number illiterate	315	259	1,117	1,097	1,036
Conduct bad after discharge	90	80	58	67	72
Number discharged	340	274	332	272	279

[a] Judicial and administrative statistics of British India, 1905.

In British India, according to Table 26, the admissions into reformatory schools has decreased from 1900 to 1904.

ARGENTINA.

TABLE 22.—*Less than 21 years of age.*

Year.	Against property.	Against person.	Year.	Against property.	Against person.
1899	364	345	1901	648	653
1900	410	436	1902	462	614

In Argentina, from 1899 to 1902, there was an increase in crime in children under 21 years of age,[a] and decrease from 1901 to 1902. But comparing the first two with the last two years shows a general increase.

TABLE 23.—*Crimes of minors in the houses of correction of Buenos Aires.*

	1898.	1899.	1900.	1901.	1902.	1903.	1904.
Against person	54	206	194	166	159	129	91
Against property	228	489	487	554	506	406	291
Against public order and morality	61	67	90	94	130	101	79
Total	343	762	771	814	795	636	461

JAPAN.

TABLE 24.—*Number of youths under 20 years of age convicted in Japan.*

Year.	Under 16 years.		From 16 to 20 years.		All.		For every 100 grown children convicted.		For every 100 children convicted.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
1894	6,169	990	15,886	1,922	22,053	2,912	21.9	27.6	17.9	21.7
1895	4,928	804	14,260	1,817	19,188	2,621	20.9	26.8	17.3	21.1
1896	4,519	768	14,560	1,687	19,079	2,455	20.0	25.9	16.7	20.6
1897	4,350	759	14,979	1,811	19,329	2,570	19.6	25.2	16.4	20.3
1898	4,411	747	14,641	1,673	19,052	2,420	20.4	24.2	16.9	19.5
1899	3,109	468	10,979	1,285	14,088	1,753	19.5	20.1	16.3	20.0
1900	2,750	455	10,910	1,214	13,660	1,669	18.9	25.1	15.9	20.1

Table 14 gives the statistics of juvenile crime for Japan, showing both absolute and relative decrease, though the population has constantly increased.

[a] República Argentina. Estadística Annaurio, Buenos Aires.

UNITED STATES.

The following table gives the number of inmates of reformatories in each million of the total population in each of the five geographical divisions for 1880 and 1890.[a]

If the relative increase of the inmates of reformatories be regarded as an indication of increase of crime among the young, it may be said that in the United States juvenile crime increased from 1880 to 1890.

TABLE 27.

States.	Per million population.			
	1880.	1890.	Increase.	Decrease.
North Atlantic	469	425	.....	44
South Atlantic	122	146	24	.....
North Central	183	244	61	.....
South Central	43	33	.....	10
Western	93	117	24	.....
United States	229	237	8	.....

XIV.—REFORMATORY STATISTICS IN THE UNITED STATES.

ALABAMA.

ALABAMA BOYS' INDUSTRIAL SCHOOL (EAST LAKE).

Children received, paroled, and in school at end of each calendar year since school began—

Year.	Received.	Paroled.	In school December 31.	Year.	Received.	Paroled.	In school December 31.
1900	26	6	22	1904	44	39	61
1901	43	14	51	1905	54	17	98
1902	22	15	58	1906	53	40	111
1903	25	27	56				

From present number those who have—

Mothers living only	49
Fathers living only	11
Both parents living	25
Both parents dead	26
Smoked cigarettes	88
Used tobacco in other forms	8
Never used tobacco	15
Used intoxicants	29
Never used intoxicants	82
Previously run away from home	74
Been arrested	61
Have played truant from school	93
Made two grades in one year	10
Number who were working at time of entering	36
Idle at time of entering	61
Going to school	13

[a] Eleventh Census, 1890.

Number in school December 31, 1906, who, when entered—

Had never attended school	0
Were in primer at time of entering	18
Were in first grade at time of entering	16
Were in second grade at time of entering	28
Were in third grade at time of entering	25
Were in fourth grade at time of entering	10
Were in fifth grade at time of entering	12
Were in sixth grade at time of entering	2
Were in seventh grade at time of entering	0

CALIFORNIA.

WHITTIER STATE SCHOOL (WHITTIER, CAL.).

TABLE 1.—*Inmates admitted and dismissed from 1891 to 1896.*

	Males.	Females.	Total.
By commitment	1,699	364	2,063
Returned from parole	190	20	210
From parole to discharge	603	80	683
Returned escapes	107	.....	107
Total	2,599	464	3,063
Discharged, term expired	895	243	1,138
Paroled	994	114	1,108
Escaped	241	.....	241
Died	19	7	26
Discharged by trustees	165	53	218
Discharged by court	14	3	17
Adjudged insane	1	1	2
Pardoned by governor	14	6	20
Total	2,343	427	2,770

Table 1 gives the number of inmates admitted and dismissed from 1891 to 1906. From Table 2 it will be seen that Mexico, Canada, Italy, and England furnish most of the foreign-born pupils. Ninety-three per cent are born in the United States and 7 per cent in foreign countries. About 50 per cent of the parents of the inmates are born in the United States, as shown in Table 3. The age when most inmates are admitted is 15 years (Table 4). The main causes of commitment are (Table 5) incorrigibility (52 per cent), burglary (15 per cent), and petit larceny (6 per cent).

TABLE 2.—*Nativity of pupils admitted from 1891 to 1906.*

Country.	Total.	Per cent.	Country.	Total.	Per cent.
Africa	1	0.05	Portugal	1	0.05
Australia	4	.19	Poland	1	.05
Austria	1	.05	Russia	4	.19
Canada	23	1.15	Sandwich Islands	1	.05
Chile	2	.09	San Salvador	1	.05
England	15	.73	Scotland	5	.24
France	6	.29	Spain	2	.09
Germany	9	.43	Sweden	5	.23
Hawaii	1	.05	Unknown	2	.09
Ireland	6	.29	Total foreign	139	6.73
Italy	16	.79	United States	1,924	93.27
Mexico	27	1.30			
Norway	3	.14	Total	2,063	100.00
Nova Scotia	3	.14			

TABLE 3.—*Nativity of parents of pupils admitted from 1891 to 1906.*

	Males.	Females.	Total.	Per cent.
Both parents native born	893	177	1,070	51.88
One parent native and one foreign born	270	82	352	10.07
Both parents foreign born	492	91	583	28.24
Unknown	44	14	58	2.81
Total	1,699	364	2,063	100.00

TABLE 4.—*Ages of pupils admitted from 1891 to 1906.*

	Males.	Females.	Total.	Per cent.		Males.	Females.	Total.	Per cent.
7 years	1	0	1	0.05	14 years	249	56	305	14.73
8 years	12	1	13	.63	14½ years	37	7	44	2.13
9 years	23	0	23	1.15	15 years	269	87	356	17.25
10 years	43	2	45	2.18	15½ years	65	18	83	4.05
10½ years	9	0	9	.43	16 years	257	85	342	16.58
11 years	60	4	64	3.10	16½ years	44	10	54	2.61
11½ years	13	1	14	.68	17 years	244	26	270	13.08
12 years	135	16	151	7.32	17½ years	25	1	26	1.26
12½ years	16	2	18	.89	18 years	15	0	15	.73
13 years	147	38	185	8.97					
13½ years	35	10	45	2.18	Total	1,699	364	2,063	100.00

TABLE 5.—*Causes of commitment of pupils admitted from 1891 to 1906.*

	Males.	Females.	Total.	Per cent.
A delinquent child	52	5	57	2.76
A dependent child	44	8	52	2.67
A minor destitute of a suitable home	1	0	1	.05
Administering poison with intent to kill	2	0	2	.09
Arson	5	0	5	.24
Assault	5	0	5	.24
Assault with intent to commit murder	3	0	3	.14
Assault with intent to commit rape	8	0	8	.39
Assault with deadly weapon	7	0	7	.34
Attempt to commit arson	1	0	1	.05
Attempt to commit burglary	7	0	7	.34
Attempt to commit grand larceny	4	0	4	.19
Attempt to commit robbery	7	0	7	.34
Attempt to pass fictitious check	1	0	1	.05
Battery	5	1	6	.29
Burglary	322	4	326	15.75
Crime against nature	14	0	14	.68
Disturbing the peace	9	3	12	.58
Embezzlement	8	1	9	.43
Felony	1	1	2	.09
Forgery	15	0	15	.73
Furnishing liquor to Indians	1	0	1	.05
Grand larceny	119	5	124	6.01
Incorrigible	790	292	1,082	52.33
Indecent exposure	1	0	1	.05
Injuring public jail	3	0	3	.14
Leading idle and dissolute life	3	0	3	.14
Malicious mischief	2	0	2	.14
Manslaughter	2	0	2	.09
Misdemeanor	1	0	1	.05
Murder	1	0	1	.05
Obtaining goods under false pretenses	4	0	4	.19
Opening and reading sealed letter of another	0	1	1	.05
Passing fictitious check	1	0	1	.05
Perjury	1	0	1	.05
Impersonating an officer	1	0	1	.05
Petit larceny	132	3	135	6.58
Rape	2	0	2	.09
Receiving stolen property	3	1	4	.19
Robbery	23	0	23	1.11
Sodomy	2	0	2	.09
Tender age and crime committed	1	0	1	.05
Vagrancy	85	39	124	6.01
Total	1,699	364	2,063	100

CONNECTICUT.

CONNECTICUT SCHOOL FOR BOYS (MERIDEN).

Table showing the age of boys at commitment (for all years).

6 years	12	15 years	1,381
7 years	44	16 years	362
8 years	101	17 years	44
9 years	271	18 years	19
10 years	689	19 years	5
11 years	818	20 years	1
12 years	1,090		7,389
13 years	1,239		
14 years	1,313		

Table showing for what offense committed (1906).

Incorrigibility	48	Assault	3
Theft	67	Breaking and entering	1
Petty larceny	2	Breaking open gas meters	1
Vagrancy	1	Trespass on railroad	4
Burglary	17	Arson	1
Truancy	4	Gambling	2
Destitution	9	Boarder	1
Statutory burglary	2		166
Injury to property	2		
Immoral practices	1		

Here, as in many schools, 15 is the age at which most frequently commitments are made.

Boys between the ages of 7 and 16 can be sent to this school during minority by any court of record in the State.

ILLINOIS.

ILLINOIS STATE REFORMATORY, PONTIAC, 1904–1906.

Owing to criticism of the parole system in this reformatory an investigation was ordered by the governor of Illinois, which showed that more than 80 per cent of the ex-inmates made good their parole pledges. As the statistics below cover a number of years and are supplemented and confirmed by the records of the Chicago identification bureau, special attention is called to them as one of the best proofs of the good that reformatories are doing and of the utility of parole law. Of the 20 per cent who returned to criminal ways quite a number were "repeaters," who have been arrested several times and often under different names, giving color to reports that many distinct persons were committing offenses.

PAROLED INMATES.

This statement covering the whole period since the inauguration of the parole system shows progressive improvement in the proportion of paroled inmates who have faithfully served their probation and so earned their final discharge.

STATEMENT OF PAROLED INMATES.

December 18, 1893, to June 30, 1901.

			Per cent.
Number paroled		3,400	
Finally released	2,042		
Returned voluntarily	23		
Died while on parole	50		
Serving parole	3		
Sentence expired while on parole	20		
Went insane while on parole	8		
Pardoned	2		
		2,148	63.17
Returned for violation of parole	621		
Violated parole and still at large	567		
Committed to other institutions	64		
		1,252	36.83

July 1, 1901, to June 30, 1902.

Number paroled		511	
Finally released	333		
Returned voluntarily	13		
Died while on parole	6		
Serving parole	2		
Sentence expired while on parole	1		
Went insane while on parole	1		
		356	69.6
Returned for violation of parole	60		
Violated parole and still at large	79		
Committed to other institutions	16		
		155	30.4

July 1, 1902, to June 30, 1903.

Number paroled		364	
Finally released	271		
Returned voluntarily	7		
Died while on parole	2		
Sentence expired while on parole	3		
Went insane while on parole	1		
		284	78
Returned for violation of parole	24		
Violated parole and still at large	39		
Committed to other institutions	17		
		80	22

July 1, 1903, to June 30, 1904.

Number paroled		256	
Finally released	200		
Returned voluntarily	3		
Died while on parole	1		
Went insane while on parole	1		
		205	80
Returned for violation of parole	17		
Violated parole and still at large	22		
Committed to other institutions	9		
Returned to institution on new charge	3		
		51	20

July 1, 1904, to June 30, 1905.

Number paroled		273	
Finally released	210		
Returned voluntarily	5		
Died while on parole	4		
Serving parole	1		
Went insane while on parole	1		
		222	81.32
Returned for violation of parole	20		
Violated parole and still at large	16		
Committed to other institutions	9		
Returned to institution on new charge	6		
		51	18.68

July 1 1905, to June 30, 1906.

			Per cent.
Number paroled		270	
Finally released	158		
Died while on parole	1		
Serving parole	66		
Sentence expired while on parole	2		
		227	84.08
Returned for violation of parole	15		
Violated parole and still at large	20		
Committed to other institutions	5		
Returned to institution on new charge	3		
		43	15.92

Of the 1,112 inmates in this institution 52 between the ages of 8 and 12 are known as the juvenile department. These inmates are kept separate from the older ones, having their own dining room, school, dormitory, and playground. They are also allowed to play outside of the inclosure.

One hundred and sixty-three between the ages of 13 and 16 are known as the Junior Republic. These inmates are also kept separate from the older class, having their own school, dormitory, and playground.

These inmates have their own form of government, make their own laws, and govern themselves in so far as it is possible for them to do so without conflicting with the general rules of the institution.

Six hundred and twenty-five of the better class of the older inmates are kept in what is known as the south wing. These are also classed according to their conduct.

Two hundred and seventy-two of the more criminal element are kept in what is known as the north wing. These inmates are also classified according to their conduct. About 45 of these may be classed as incorrigible. The incorrigibles are kept separate from the better class as much as possible, but they still have a degrading influence over others who try to do right. One bad boy is detrimental to the good conduct of any shop or school. A separate building should be erected in which those incorrigible inmates may eat, sleep, and work. By this they could be kept entirely separate from the rest of the inmates until such time as they may prove by their conduct that they are fit to associate with the better class.

Report of chief clerk, from July 1, 1905 to June 30, 1906.

CRIMES FOR WHICH SENTENCED.

Burglary	182	Assault to kill	8
Larceny	66	Rape	7
Petit larceny	60	Other offenses	47
Robbery	59		458
Forgery	17		
Manslaughter	12		

BIRTHPLACE OF INMATES.

United States	413
Foreign countries	44
Unknown	1
	458

EDUCATION OF INMATES.

Read and write	6	Sixth grade	46
Unable to read or write	54	Seventh grade	30
First grade	8	Eighth grade	38
Second grade	37	High school	13
Third grade	66	College	3
Fourth grade	79		
Fifth grade	78		458

RELIGION.

None	193	14 years and under:	
Catholic	141	None	37
Methodist Episcopal	25	Catholic	5
Baptist	13	Methodist Episcopal	3
Other religions	28	Other religions	4

MENTAL CAPABILITY.

Below average	80
Average	287
Above average	91
	458

ASSOCIATES.

Bad	308
Mixed	109
Good	34
Fair	7
	458

LIVING AT HOME OR ELSEWHERE.

Reared at home and living at home	228
Reared at home and living elsewhere	192
Not reared at home nor living at home	38
	458

USED TOBACCO.

Chewed, and smoked cigarettes, cigars, or pipe	266	
Chewed only	37	
Smoked cigarettes, cigars, or pipe	26	
Smoked cigarettes only	20	
Used none, so far as known	60	
		409
14 years and under:		
Chewed, and smoked cigars, pipe, or cigarettes	29	
Chewed only	1	
Smoked cigarettes only	11	
Used none, so far as known	8	
		49
		458

USED INTOXICATING LIQUORS.

To some extent	260	
None, so far as known	149	
		409
14 years and under:		
To some extent	21	
None, so far as known	28	
		49
		458

ARRESTED PRIOR TO SENTENCE.

Arrested one or more times	278
None, so far as known	180
	458

STATEMENT OF PARENTS.

Divorced or separated	49
Father drank to excess	141
Parents or ancestors insane	16
Parents or ancestors criminals	8
Parents or ancestors epileptics	1
Parents paupers	3

OCCUPATION OF PARENTS.

Laborers, teamsters, miners, etc	145	Police, etc	8
Farmers	69	Blacksmiths	8
Unknown	43	Contractors	7
Carpenters	21	Saloonkeepers or bartenders	7
Engineers, firemen, and brakemen	20	Cooks and bakers	6
Machinists	13	Bookkeepers, clerks, and salesmen	6
Merchants	12	Tailors	6
Masons	10	Other occupations	60
Molders	9		458
None	8		

RELIGION OF PARENTS.

Catholic	142	Presbyterian	18
None	101	African M. E	15
Methodist Episcopal	49	Lutheran	14
Colored Baptist	25	Other religions	30
Unknown	25		458
Baptist	21		
Christian	18		

EDUCATION OF PARENTS.

Read and write	371	Read, not write	3
None	56		458
Unknown	28		

PECUNIARY CONDITION.

Poor	288	Unknown	20
Fair	139		458
Good	11		

INDIANA.

INDIANA BOYS' SCHOOL (PLAINFIELD, 1906.)

Population movement.

Admissions since the organization of the school, January 1, 1868	6,253
Number discharged owing to age limit, October 31, 1905	4,223
Number attaining age limit from October 31, 1905, to October 31, 1906	164
Total discharges on age limit October 31, 1906	4,687
Number on leave of absence October 31, 1906, and subject to the school's supervision if not dead or incarcerated elsewhere	673

Demerit offenses.

Talk	10	Falsehood	100
Disobedience	10	Theft	100
Disorder	10	Obscenity	100
Laziness	10	Disrespect and impudence	100
Vandalism	10	Vulgarity	200
Willful waste	20	Insubordination	200
Quarreling	50	Planning escape	500
Dormitory	50	Escape	1,000
Shielding	50	Secret vice	1,000
Profanity	50	Planning immoral association	1,000
Fighting	100	Immoral association	2,000
Tobacco or money	100		

Failure to report to be doubly demerited, according to the offense concealed. Offense for which there is a demerit of 50 or over shall, in addition, be liable to corporal punishment at the discretion of the superintendent. The superintendent reserves the right at all times to cancel demerits. An officer must be absolutely certain that a boy is guilty of violating a rule before a demerit report is given.

When a demerit is given it should be the duty of the officer to be explicit with the offender. The boy begins with naught (0) to his credit and gains 10 merits each day for perfect conduct. Thirty days of continuous good behavior entitles the boy to 100 extra merits, 400; for ninety days' continuous good behavior he is given an additional credit of 50 merits, 1,250; thus making it possible for the boy to gain the required number, 5,000, on the three hundred and sixty-fifth day from date of admission, and thus be eligible for parole.

Ages of boys committed during the year.

Between 8 and 9 years of age	2	Between 14 and 15 years of age	47
Between 9 and 10 years of age	4	Between 15 and 16 years of age	50
Between 10 and 11 years of age	14	Between 16 and 17 years of age	20
Between 11 and 12 years of age	21	Between 17 and 18 years of age	5
Between 12 and 13 years of age	25		
Between 13 and 14 years of age	28	Total	216

Educational standing.

Illiterate	2	Seventh year	9
First grade	9	Eighth year	9
Second year	20	Nine B	1
Third year	42	High school second year	1
Fourth year	52		
Fifth year	43	Total	216
Sixth year	28		

Destructive habits of boys committed.

Tobacco and cigarettes:	
Use tobacco	133
Do not use tobacco	83
Use cigarettes	89
Do not use cigarettes	127
Intoxicants:	
Claimed they had formed an appetite for beer	16
Claimed to be habitués of the wine room	5
Claimed they had formed an appetite for pop	2
Addicted to all kinds of drinks	45
Claimed they were temperate as to the use of intoxicants	148
Previous associations:	
Claimed they affiliated with bad companions	148
Claimed mixed companions	48
Claimed good companions	20

Parental relation of boys committed during the year.

Claimed fathers were living	139
Claimed stepfathers	22
Claimed mothers living	161
Claimed stepmothers	13
Claimed fathers dead	47
Claimed mothers dead	48
In doubt as to father's death	15
In doubt as to mother's death	3
Parents are unknown	6
Claimed to be orphans	2
Nativity of parents:	
American birth—	
Fathers	173
Mothers	156
Foreign birth—	
Fathers	24
Mothers	26
Unknown—	
Fathers	15
Mothers	4
Education of parents:	
Read and write—	
Fathers	175
Mothers	170
Illiterate—	
Fathers	23
Mothers	29
Intemperance of parents:	
Fathers addicted to the drink habit	99
Mothers addicted to the drink habit	19

INDIANA INDUSTRIAL SCHOOL FOR GIRLS (1906).

Table showing social condition of parents of girls remaining October 31, 1906, at time of commitment.

Parents living together	53
Parents living but separated	39
Father dead, mother widow	29
Mother dead, father widower	24
Parents dead	35
Stepfather	30
Stepmother	26
Stepfather and stepmother	12
Illegitimate	12
Total	260

Table showing population since origin of industrial school for girls.

Year.	Received on commitment.	Discharged, died, or withdrawn during year.	Enrolled at end of year.	Average attendance.	Year.	Received on commitment.	Discharged, died, or withdrawn during year.	Enrolled at end of year.	Average attendance.
1873	15	.....	15	.....	1890	43	24	151	152.1
1874	84	15	84	.....	1891	42	20	143	142.5
1875	57	14	127	.....	1892	48	56	144	134.3
1876	57	28	150	.....	1893	45	36	148	146.3
1877	40	53	138	.....	1894	36	16	152	154
1878	44	32	147	.....	1895	60	29	180	169
1879	52	59	147	.....	1896	30	19	202	189.7
1880	41	45	148	.....	1897	47	55	206	206.2
1881	52	58	148	.....	1898	46	75	200	206.6
1882	51	62	144	.....	1899	39	80	180	184.3
1883	34	41	143	.....	1900	35	55	187	182.6
1884	48	55	142	.....	1901	44	107	144	166.5
1885	40	33	132	.....	1902	41	40	175	156.9
1886	38	48	177	.....	1903	53	34	207	183.5
1887	31	51	128	.....	1904	51	75	203	207.6
1888	44	18	133	.....	1905	69	55	239	214
1889	48	22	144	.....	1906	85	84	260	253.1

IOWA.

TABLE 1.—*Industrial schools.*[a]

1903.

	Number of inmates present July 1.				Number of inmates present July 1.		
	Boys.	Girls.	Total.		Boys.	Girls.	Total.
1891	367	109	476	1899	502	152	654
1893	401	117	518	1901	473	189	662
1895	407	142	549	1903	495	183	678
1897	444	145	589				

	Number of inmates present July 1.		
	Boys.	Girls.	Total.
Criminal father	3	.....	3
Criminal mother	3	.....	3
Criminal parents	1	.....	1
Intemperate father	85	22	107
Intemperate mother	13	.....	13
Epileptic father	1	.....	1
Insane mother	4	.....	4
Total	110	22	132
Not reported	116	38	154
Grand total	226	60	286

[a] Board of Control of State Institutions, State of Iowa, 1903.

Table 1 shows a gradual increase in inmates of the industrial schools from 1891 to 1903. The latter part of table indicates the bad influence of intemperance in a moral and hereditary way upon and in contributing to youthful crime, showing that 120 out of 132 reported had either an intemperate father or mother.

TABLE 2.—*Education, 1902–3.*

	Boys.	Girls.	Total.
Read and write	186	50	236
Read but not write	40	10	50
Can not read or write	.....	.....	.....
	226	60	286

In Table 2 the figures show that not one of the inmates of the reformatories was illiterate for the biennial period of 1902 and 1903; but there was illiteracy among the parents, there being 47 children whose father could not read nor write and 56 whose mother was illiterate. (See Table 3.)

Out of 286, 118 were without father or without mother (Table 3), and 23 were left at home; that is, nearly half were without full parental care.

Penitentiaries June 30—	Number under 19 years old.	Whole number present July 1.	Penitentiaries June 30—	Number under 19 years old.	Whole number present July 1.
1891	96	604	1899	135	1,145
1893	112	677	1901	80	1,053
1895	152	781	1903	93	985
1897	151	983			

TABLE 3.—*Home life of inmates received during biennial period ending June 30, 1903.*

	Age at death of—						Education of—						Left Home—	
	Father.			Mother.			Father.			Mother.				
	Under 10.	10 to 15.	15 and over.	Under 10.	10 to 15.	15 and over.	Can read and write.	Can not read or write.	Unknown.	Can read and write.	Can not read or write.	Unknown.	Under 15.	After age 15.
Boys	33	7	.....	28	8	1	177	39	10	175	40	11	22	1
Girls	21	3	.....	14	3	.....	34	18	.....	27	16	.....	.....	.....
Total	54	10	.....	42	11	1	211	47	10	202	56	11	22	1

IOWA INDUSTRIAL SCHOOL FOR BOYS, ELDORA, 1905.

Movement of population.

Total number admitted to school from date of opening, September 21, 1868, to June 30, 1905	3,269
Total number discharged from school from date of opening, September 21, 1868, to June 30, 1905	2,830
Total number admitted from:	
July 1, 1903, to June 30, 1904	111
July 1, 1904, to June 30, 1905	124
Total for the period	235
Total number returned for violation of parole:	
July 1, 1903, to June 30, 1904	3
July 1, 1904, to June 30, 1905	11
Total for the period	14
Total number returned for violation of pardon:	
July 1, 1903, to June 30, 1904	1
July 1, 1904, to June 30, 1905	0
Total for the period	1
Whole number in school during:	
July 1, 1903, to June 30, 1904	631
July 1, 1904, to June 30, 1905	638
Total for the period	766
Whole number passed out of school:	
July 1, 1903, to June 30, 1904	128
July 1, 1904, to June 30, 1905	199
Total for the period	327
Number died:	
July 1, 1903, to June 30, 1904	3
July 1, 1904, to June 30, 1905	0
Total for the period	3
Number remaining in school:	
June 30, 1904	503
June 30, 1905	439

Decrease for the period:	
July 1, 1903, to June 30, 1904	13
July 1, 1904, to June 30, 1905	64
Total for the period	77
Average daily population:	
July 1, 1903, to June 30, 1904	510 1/12
July 1, 1904, to June 30, 1905	488 3/4
Total for the period	499 4/12

Ages of those admitted July 1, 1903, to June 30, 1905.

Seven years	2
Eight years	4
Nine years	8
Ten years	17
Eleven years	17
Twelve years	24
Thirteen years	28
Fourteen years	44
Fifteen years	47
Sixteen years	42
Seventeen years	2
Total	235

Education of those received July 1, 1903, to June 30, 1905.

Can read and write	201
Can not read and write	34
Total	235

Inmates having relatives in similar institutions.

	Father.	Mother.	Brother.	Sister.	Uncle.	Aunt.	Cousins.
Industrial school	0	0	22	4	0	3	10
School for blind	0	2	0	0	3	1	1
School for deaf	0	0	3	2	9	0	0
School for feeble-minded	1	0	0	0	0	0	0
Hospital for insane	0	2	0	0	0	0	2
Penitentiaries	4	0	0	1	0	0	2

Nativity of those received July 1, 1903, to June 30, 1905.

Native born, native parents	123
Native born, foreign parents	43
Native born, mixed parents	34
Native born, parentage unknown	16
Foreign born	12
Nativity unknown	7
Total	235

Parental condition of those received July 1, 1903, to June 30, 1905.

Orphans	14
Half orphans by father	46
Half orphans by mother	34
Parents living together	90
Parents separated	47
Illegitimate	1
Abandoned by parents	3
Total	235

Health and physical condition July 1, 1903, to June 30, 1905.

In good health	220
Weak lungs	1
Weak eyes	2
Itch	1
Epileptic	2
Catarrh	1
Skin disease	2
Ruptured	1
Tongue-tied	1
Weak kidneys	1
Nearsighted	1
Partly deaf	1
Total	235

Home life of those received.

At death of father—	
Under 10 years	39
10 years and under 15	12
At death of mother—	
Under 10 years	27
10 years and under 15	14
15 years and over	4
Education of father—	
Can read and write	154
Can not read and write	41
Unknown	40
Education of mother—	
Can read and write	166
Can not read and write	43
Unknown	26
Leaving home—	
Before 15 years of age	17
After 15 years of age	3

Moral and hereditary condition of parents, July 1, 1903, to June 30, 1905.

Criminal fathers	7
Criminal mothers	4
Criminal both parents	1
Intemperate fathers	145
Intemperate mothers	17
Feeble-minded	2
Idiotic	0
Epileptic fathers	2
Insane mothers	8
Deaf	0
Deaf and dumb	0
Blind	3
Parents blood relation	0

Offenses of inmates, July 1, 1903, to June 30, 1905.

		Per cent.
Against the person	163	0.6931
Against property	53	0.2255
Against public order and decency	19	0.0808

KANSAS.

STATE INDUSTRIAL SCHOOL FOR BOYS, TOPEKA, KANS.

Past history of pupils received.

	White.	Colored.	Total.
From towns or cities	150	59	209
From the country	35	4	39
From fairly good homes—parents living together	40	7	47
From poor homes—parents living together	30	8	38
From homes broken by death	65	22	87
From homes broken by divorce	21	8	29
From homes broken by desertion	10	5	15
Boys having no homes	19	13	32
Mothers dead	41	13	54
Fathers dead	34	13	47
Both parents dead	13	7	20
Fathers intemperate	73	17	90
Boys having used liquor	28	16	44
Boys having used tobacco	80	34	114
Boys having used profane language	90	40	130
Boys out of school for six months or more	75	33	108
Boys having played truant from school	85	35	120
Pecuniary circumstances (one year, 1905-6, 130 homes):			
Good	5	.....	5
Fair	22	2	24
Poor	65	26	91
Parents indifferent to school attendance, 1905-6	65	25	90

Statistics of paroled pupils.

	White.	Colored.	Total.
Boys on parole June 30, 1904	100	46	146
Paroled during the biennial period	155	64	219
Number of paroles issued	109	67	226
Number of boys paroled more than once	14	3	17
Returned voluntarily	4	1	5
Returned for violation of parole	21	12	33
Died while on parole	3	2	5
Discharged from parole	57	11	68
Homes found for homeless boys	39	23	59
Boys on parole June 30, 1906	170	84	254

Age of pupils when received.

	White.	Colored.	Total.
Eight years	2	1	3
Nine years	4	1	5
Ten years	10	8	18
Eleven years	16	6	22
Twelve years	26	7	33
Thirteen years	36	10	46
Fourteen years	36	14	52
Fifteen years	51	16	67
Average age of pupils when received	13¼	12¼	13

KENTUCKY.

Louisville Industrial School (1906).

Table by numbers, etc.

	White girls.	Colored girls.	White boys.	Colored boys.
Whole number admitted since opening of school	1,047	233	3,520	1,462
Number in school Aug. 31, 1905	97	26	191	84
Admitted during the fiscal year	24	11	108	50
In connection with school during year	121	37	299	134
Honorably released and homes furnished	21	19	103	59
Discharged by court	2	1	8	5
Unfit subjects	1	.....	.....	1
Escaped	1	2	7	3
Died	.....	.....	1	.....
United States inmate's sentence expired	.....	.....	1	.....
Number in school Aug. 31, 1906	96	15	179	66

Table by ages.

	White girls.	Colored girls.	White boys.	Colored boys.		White girls.	Colored girls.	White boys.	Colored boys.
6 years	1	.....	4	.....	13 years	1	2	12	8
7 years	.....	.....	5	.....	14 years	5	5	16	14
8 years	3	.....	9	.....	15 years	3	2	18	6
9 years	.....	.....	5	4	16 years	2	.....	4	1
10 years	4	1	8	6					
11 years	.....	1	11	2	Total	24	11	108	50
12 years	5	.....	16	9					

Table by causes of commitment.

	White girls.	Colored girls.	White boys.	Colored boys.		White girls.	Colored girls.	White boys.	Colored boys.
Destitute	19	5	27	.....	Robbery	.....	.....	2	.....
Incorrigible	3	2	45	15	Horse stealing	.....	.....	.....	2
Disorderly conduct	2	3	26	26	Suspected felony	.....	.....	.....	1
Petit larceny	.....	.....	3	3	Vagrancy	.....	.....	3	.....
Grand larceny	.....	.....	1	1					
Housebreaking	.....	1	1	2	Total	24	11	108	50

Table by social condition.

	White girls.	Colored girls.	White boys.	Colored boys.		White girls.	Colored girls.	White boys.	Colored boys.
Lost both parents	8	2	2	6	Parents separated	3	3	11	9
Lost their father	10	2	19	20	Parents living and together	1	3	64	10
Lost their mother	2	1	11	5	Mother insane	.....	.....	1	.....
Had stepfather	1	1	3	7					
Had stepmother	.....	.....	3	4					

Causes for which boys are committed.

	White.	Colored.	Total.
Incorrigibility	72	27	99
Delinquency	43	13	56
Larceny	4	3	7
Petit larceny	13	9	22
Grand larceny	8	1	9
Burglary	4	3	7
Burglary and larceny	19	3	22
Vagrancy and larceny	1	0	1
Vagrancy	8	2	10
Vagrancy and incorrigibility	3	0	3
Incorrigibility and immorality	1	0	1
Assault	2	1	3
Manslaughter in fourth degree	1	0	1
Felony	1	0	1
Attempted rape	0	1	1
Destruction of property	2	0	2
Obstructing railroad	1	0	1
Disturbing the peace	2	0	2

MAINE.

State School for Boys, South Portland, Me., 1906.

Ages of all when committed.

7 years	5	14 years	490
8 years	69	15 years	487
9 years	98	16 years	92
10 years	220	17 years	19
11 years	277	18 years	4
12 years	396	19 years	2
13 years	456		

Facts connected with the moral condition of the boys when received.

Whole number received	2,615	Idle	1,658
Have intemperate parents	881	Much neglected	907
Lost father	816	Truants	1,140
Lost mother	654	Sabbath breakers	992
Relatives in prison	335	Untruthful	2,053
Step parents	491	Profane	1,908

Disposition of those discharged since opening of the school.

Discharged on expiration of sentence	223	Indentured to—Continued.	
Discharged by trustees	731	Miller	1
Indentured to—		Sea captains	5
Barber	1	Shoemakers	14
Blacksmith	1	Tailors	3
Boarding mistress	1	Tallow chandler	1
Boilermaker	1	Allowed to leave on trial	1,026
Cabinetmaker	6	Allowed to enlist	19
Carpenters	13	Illegally committed	19
Cooper	1	Remanded	64
Farmers	287	Pardoned	15
Harness makers	3	Finally escaped	81
Laborers	9	Violated trust	49
Lumbermen	3	Died	49
Machinists	5	Delivered to courts	24
Manufacturers	2	Returned to masters	4
Mason	1		

Offenses for which committed.

Larceny	1,626	Violation of city ordinance	2
Truancy	294	Malicious mischief	93
Common runaway	162	Drunkenness	3
Vagrancy	112	Breaking and entering	67
Assault, and assault and battery	102	Shop breaking	19
Felonious assault	1	Idle and disorderly	18
Vagabondage	5	Cheating by false pretenses	17
Forgery and uttering	1	Common pilferer	19
Violation of postal laws	1	Arson	14
Cruelty to animals	5	Other offenses	54

Nativity of all committed.

Foreigners	278
Born in United States	2,295
Nativity not known	41

MASSACHUSETTS.

Lyman School For Boys (Westboro, Mass.).

The following table gives some results of the work of the Lyman School For Boys after leaving the institution:

Table 1.

	1893.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.
	P. ct.	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*
Doing well	0.42	0.46	0.53	0.58	0.61	0.69	0.60	0.60	0.58	0.70	[a]0.62	[a]0.63
Not doing well	.....	.03½	.02	.03	.02	.02	.02	.01	.02	.02	.05	.07
Have been in other penal institutions	.35	.35	.30	.31	.22	.22	.24	.22	.29	.16	.12	.11
Out of the State	.....	.01½	.04	.02	.08	.01	.07	.02	.01	.02	.08	.08
Lost track of	.23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Doing well at last account	.....	.09	.07	.02½	.04½	.06	.....	.....	.08	.05	.01	.10
Not doing well at last account	.....	.05	.04	.03½	.02½	.....	.....	.....	.02	.05	.12	.11

[a] The falling off from the 70 per cent doing well in 1904 is accounted for by the larger number in 1905 and 1906 who have left the State or whose whereabouts are unknown, and whose conduct is thus unclassified.

The Lyman School receives boys under 15 years of age who are committed to its care by the courts. About one-quarter are complained of by their parents for stubbornness, which may mean a very hard record.

As this is one of the institutions where special effort has been made to keep account of inmates after they leave, Table 1 invites careful examination. About 60 to 70 per cent do well who leave the institution.

Table 2 shows the per cent of foreign parentage to be greater than that of American parentage. The age at which most inmates are received is 14 (Table 3). Larceny, stubbornness, and burglary are the chief causes of commitment (Table 4).

Table 2.—*Nativity of parents of boys committed during the past ten years.*

	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906 (14 months)
Fathers born in the United States	16	8	8	16	18	20	23	21	14	26
Mothers born in the United States	15	28	21	15	19	19	8	22	20	12
Fathers foreign born	12	25	18	12	17	17	8	19	16	14
Mothers foreign born	11	10	17	16	15	14	24	19	12	27
Both parents born in United States	23	31	27	36	47	52	48	32	46	53
Both parents foreign born	34	56	47	90	83	80	71	74	89	95
Unknown	34	45	44	11	14	17	17	18	23	31
One parent unknown	32	33	36	13	1	22	13	29	12	15
Per cent of American parentage	31	27	25	30	35	37	36	30	32	32
Per cent of foreign parentage	37	40	39	60	54	40	50	52	53	51
Per cent unknown	32	33	36	10	11	14	14	18	15	17

Nativity of boys committed during the past ten years.

Born in United States	103	146	130	142	158	167	153	155	171	200
Foreign born	20	33	37	30	24	26	18	23	18	25
Unknown	1	5	1	1	3	2	3	1	2	1

TABLE 3.—*Age of boys when committed, in part.*

Age.	Totals.	Age.	Totals.
Six	5	Fourteen	2,151
Seven	26	Fifteen	1,000
Eight	125	Sixteen	536
Nine	257	Seventeen	182
Ten	532	Eighteen and over	17
Eleven	816	Unknown	44
Twelve	1,229		
Thirteen	1,762	Total	8,682

TABLE 4.—*Offenses for which boys were committed during fourteen months.*

Assault	5	Vagrancy	7
Attempted arson	1	Unlawful appropriation	2
Breaking and entering	48	Ringing false fire alarm	1
Burning building	2	Violating rules of truant school	2
Habitual absentee and school offender	4	Idle and disorderly	1
Larceny	81	Malicious mischief	1
Molesting the mechanism of a railroad train	2	Delinquent child	9
Stubbornness	55	Breaking glass	1
Taking team	4	Total	226

TABLE 5.—*Showing the average time spent in the institution for the past ten years.*

	Months.		Months.
1897	21.00	1902	19.53
1898	19.90	1903	19.03
1899	20.40	1904	20.36
1900	19.27	1905	20.39
1901	20.25	1906 (14 months)	17.05

TABLE 6.—*Showing weekly per capita cost of the institution for ten years.*

	Gross.	Net.		Gross.	Net.
1897	$4.72	$4.66	1902	$4.54	$4.47
1898	4.52	4.49	1903	4.74	4.72
1899	4.39	4.36	1904	4.90	4.87
1900	4.73	4.70	1905	4.63	4.61
1901	4.47	4.45	1906 (14 months)	4.90	4.84

STATE INDUSTRIAL SCHOOL (MASSACHUSETTS), 1906.

Table showing the conduct of the 95 girls who passed out of custody within the past fourteen months.

Living respectably	66, or 69 per cent
Having behaved badly	14, or 15 per cent
Conduct unknown	10, or 11 per cent
Conduct not classified	5, or 5 per cent

Table showing technical causes of 126 commitments within the past fourteen months.

Stubbornness [a]	60	Idle and disorderly	8
Stubborn and disobedient	1	Common night walking	3
Stubborn and disobedient and larceny	1	Drinking	1
Delinquency	8	Forgery	1
Wayward child	2	Larceny	29
Lewd, wanton, and lascivious	2	Breaking and entering and larceny	1
Leading idle and vicious life	3	Vagrancy	1
Fornication	1	Runaway	3
		Habitual school absentee	1

[a] The charge of stubbornness and delinquency may cover any offense, from the least serious to the most serious. The complaint of stubbornness can be made by the parent only.

Table showing ages of 126 girls committed within the past fourteen months.

10 years	1	14 years	20
11 years	2	15 years	48
12 years	12	16 years	31
13 years	11	19 years [a]	1

Average age, 15 years 5 months 27 days.

Table showing domestic conditions of the 126 girls committed within the past fourteen months.

Both parents at home	52	Mother or woman in charge of the home worked out	43
Mother only at home	30	Girl previously worked in mill, factory, or store	53
Father only at home	18	Worked at housework or caring for children	26
Mother and stepfather at home	7	Worked in boarding house, hotel, or restaurant	3
Father and stepmother at home	6	Worked for dressmaker	1
Both parents dead	3	Worked in greenhouses	1
One dead, one whereabouts unknown	4	Helped at home	3
Whereabouts of both unknown	4	Attended school	24
Lived with other relatives	10	Committed as under the average of intelligence	16
No home	3	Ran away from home just previous to commitment	59
Temperate fathers or stepfathers	23	Been under the care of the State board of charity	22
Intemperate fathers or stepfathers	62	Been under the charge of homes or societies	27
Been in penal institutions	11	Been on probation from the courts	19
Grossly immoral fathers	4	Been in court before	8
Fathers guilty of incest	3		
Brother guilty of incest	1		
Temperate mothers or stepmothers	62		
Intemperate mothers or stepmothers	17		
Been in penal institutions	6		
Grossly immoral mothers	18		
Families on associated charities' records	31		
No woman in the home	3		

Table showing the cause for return to the school during the last seven years.[b]

	1900.		1901.		1902.		1903.		1904.		1905.		1906.[c]	
	No.	*P. ct.*	*No.*	*P. ct.*	*No.*	*P. ct.*	*No.*	*P. ct.*	*No.*	*P. ct.*	*No.*	*P. ct.*	*No.*	*P. ct.*
Change of place, visit, illness	28	0.32	37	0.37	56	0.50	54	0.46	57	0.41	51	0.39	44	0.36
Unsatisfactoriness, larceny, perjury, running away	27	.31	20	.31	31	.28	23	.20	38	.28	39	.30	26	.22
Danger of unchaste conduct	11	.12	14	.14	14	.13	17	.14	16	.12	15	.11	16	.13
Unchaste conduct	22	.25	28	.28	11	.10	23	.20	27	.20	27	.20	35	.29
	88	.....	99	.....	112	.....	117	.....	138	.....	132	.....	121	.....

[a] Real age ascertained from birth records in England.
[b] Counting each individual under most serious cause for return during each year.
[c] Fourteen months.

Table showing conduct of all girls who had, each year, been in the care of the school for one year or more, including those who had passed out of custody during that year.

	1891–1896.		1896–1901.		1901–1906.		1904–5.		1905–6.[a]	
LIVING RESPECTABLY.										
I. No longer in the care of the State:	*No.*	*P. ct.*	*No.*	*P. ct.*	*No.*	*P. ct.*	*No.*	*P. ct.*	*No.*	*P. ct.*
Attained majority (married), living respectably	69	.....	69	.....	105	.....	18	.....	26	.....
Attained majority (unmarried), living respectably	94	.....	113	.....	165	.....	40	.....	34	.....
Died, conduct has been good	4	.....	2	.....	9	.....	.....	.....	2	.....
Honorably discharged	8	.....	21	.....	26	.....	2	.....	4	.....
Total	175	0.71	207	0.62	305	0.70	60	0.68	66	0.69
II. In care of but no longer maintained by the State:										
Married, living respectably	146	.....	137	.....	183	.....	37	.....	41	.....
Unmarried, with friends	161	.....	204	.....	282	.....	43	.....	57	.....
At work in other families	569	.....	716	.....	661	.....	135	.....	137	.....
At work elsewhere	2	.....	1	.....	31	.....	5	.....	8	.....
Attending school, paying their way	37	.....	25	.....	36	.....	7	.....	2	.....
Total	915	.68	1,083	.56	1,193	.54	227	.50	245	.56
Total no longer maintained and living respectably	1,090	.69	1,290	.57	1,498	.57	287	.53	311	.58
CONDUCT BAD OR DOUBTFUL.										
I. No longer in the care of the State:										
Attained majority (married), in prison or elsewhere	22	.....	13	.....	15	.....	6	.....	4	.....
Attained majority (unmarried), in prison or elsewhere	17	.....	41	.....	48	.....	10	.....	10	.....
Total	39	.16	54	.16	63	.14	16	.18	14	.15
II. Still in care of State, under 21:										
Married	21	.....	14	.....	25	.....	7	.....	5	.....
On probation with friends or at large	8	.....	21	.....	19	.....	5	.....	1	.....
Recalled to school for serious fault and remaining	43	.....	48	.....	76	.....	10	.....	22	.....
In penal institution	43	.....	58	.....	21	.....	4	.....	2	.....
Were in prison, now discharged	.....	.....	3	.....	18	.....	4	.....	4	.....
In hospital through their own misconduct	28	.....	27	.....	22	.....	4	.....	6	.....
Total conduct bad or doubtful.	143 182	.11 .12	171 225	.09 .10	181 244	.08 .09	34 50	.07 .09	40 54	.08 .09
CONDUCT NOT KNOWN.										
I. No longer in the care of the State:										
Married	9	.....	11	.....	11	.....	4	.....	[b]2	.....
Unmarried	14	.....	32	.....	40	.....	5	.....	[c]8	.....
	23	.10	43	.13	51	.12	9	.10	10	.11
II. Still in the care of the State:										
Married	5	.....	43	.....	39	.....	6	.....	[d]13	.....
On probation with friends, out of New England	.....	.....	55	.....	51	.....	14	.....	[e]14	.....
Runaways from the school, homes or places	89	.....	110	.....	139	.....	30	.....	[f]30	.....
Total conduct unknown	94 117	.07 .07	208 251	.11 .11	229 280	.10 .10	50 59	.11 .11	57 67	.13 .13
REMAINDER, WHOSE CONDUCT FOR OBVIOUS REASONS NOT CLASSIFIED.										
I. No longer in the care of the State:										
Of age or discharged, unfit, defective, or insane	7	.....	25	.....	18	.....	3	.....	4	.....
Died, never on probation	.....	.....	3	.....	.....	.....	.....	.....	.....	.....
Total	7	.03	28	.09	18	.04	3	.03	4	.04

[a] 1905–6 includes fourteen months.
[b] Last report, conduct good, 1; bad, 1.
[c] Last report, conduct good, 6; bad, 2.
[d] Last report, conduct good, 0; bad, 0.
[e] Last report, conduct good, 0; bad, 2.
[f] Last report, conduct good, 12; bad, 9; good when ran away, bad later, 6; were never on probation, 3.

Table showing conduct of all girls who had, each year, been in the care of the school for one year or more, including those who had passed out of custody during that year—Cont'd.

	1891–1896.		1896–1901.		1901–1906.		1904–5.		1905–6.	
REMAINDER, WHOSE CONDUCT FOR OBVIOUS REASONS NOT CLASSIFIED—continued.										
II. Still in the care of the State:	*No.*	*P. ct.*	*No.*	*P. ct.*	*No.*	*P. ct.*	*No.*	*P. ct.*	*No.*	*P. ct*
Ill, defective, or insane, in institutions not penal	10	.....	42	.....	62	.....	18	.....	18	.....
In State industrial school through the year	139	.....	270	.....	377	.....	81	.....	57	.....
Boarding out in private families with schooling	3	.....	63	.....	15	.....	1	.....	.....	.....
Recalled for illness or change of place not for serious fault, and remaining in the school	37	.....	92	.....	142	.....	43	.....	22	.....
Total	189	.14	467	.24	596	.27	143	.31	97	.23
Total whose conduct is not classified	196	.12	495	.22	614	.23	146	.27	101	.19
Grand total	1,585	.....	2,261	.....	2,636	.....	542	.....	533	.....

Table, showing, in the light of their offense before commitment, the status at 21 years of all girls who passed out of custody in specified years, excepting the nonclassified class.[a]

NUMBERS.

Record at commitment.	Number.				Living respectably.				Conduct bad or doubtful.				Conduct not known.			
	1896–1901.	1901–1906.[b]	1905.	1906.[b]	1896–1901.	1901–1906.[b]	1905.	1906.[b]	1896–1901.	1901–1906.[b]	1905.	1906.[b]	1896–1901.	1901–1906.[b]	1905.	1906.[b]
Immoral conduct	199	250	43	51	129	176	29	37	46	43	10	8	24	31	4	6
Danger of immoral conduct	81	78	25	16	58	66	22	13	11	8	1	3	12	4	2	....
Stubbornness, larceny, drunkenness, etc	90	91	17	23	68	66	9	16	14	10	5	3	8	15	3	4
Total	370	419	85	90	255	308	60	66	71	61	16	14	44	50	9	10

PERCENTAGES.

Immoral conduct	0.54	0.60	0.50	0.57	0.65	0.70	0.67	0.73	0.23	0.17	0.23	0.16	0.12	0.12	0.09	0.12
Danger of immoral conduct	.22	.19	.29	.18	.72	.85	.88	.81	.14	.10	.04	.19	.15	.05	.08	....
Stubbornness, larceny, drunkenness, etc	.24	.22	.20	.26	.75	.73	.53	.70	.15	.11	.29	.13	.09	.16	.17	.18
Total	.....	.....	.....	.....	.69	.74	.70	.73	.19	.15	.19	.16	.12	.12	.10	.11

[a] Not classified because found to be feeble-minded, or very dull, or insane and therefore unfit for the school or for placing.

[b] 1906 includes fourteen months.

MICHIGAN.

Industrial School For Boys.

Cause of commitment.

Larceny	4,779	Disorderly	221
Grand larceny	79	Truant and disorderly	1,421
Burglary	191	Profane language	11
Burglary and larceny	65	Drunkenness	16
Assault and battery	358	Robbing United States mail	4
Assault	29	Violating local option law	1
Attempt to murder	3	Obstructions on railroad	11
Vagrancy	401	Juvenile disorderly	236
Malicious trespass	100	Embezzlement	2
Truancy	785	Carrying concealed weapons	5
Arson	37	Malicious destruction of property	51
Rape	6	Cruelty to horse	3
Boarding railroad trains	14	Receiving stolen property	4
False pretenses	16	Indecent exposure	1
Careless use of firearms	6	Attempt to poison	1
Manslaughter	6	Delinquent	8
Horse stealing	32	Highway robbery	1
Forgery	17	Returned	738
House breaking	3		
Defacing buildings	10	Total	9,671
Breaking locks	1		

Average number of months boys have remained in the institution.

Year.	Months.	Year.	Months.
1860–61	28⅔	1883–84	23
1861–62	32½	1884–85	22
1862–63	31	1885–86	23
1863–64	28½	1886–87	26
1864–65	22	1887–88	26
1865–66	27	1888–89	22½
1866–67	20	1889–90	23½
1867–68	30½	1890–91	23½
1868–69	32½	1891–92	22½
1869–70	30½	1892–93	22
1870–71	32½	1893–94	19
1871–72	32⅔	1894–95	18
1872–73	30	1895–96	18½
1873–74	27⅔	1896–97	19½
1874–75	30	1897–98	20½
1875–76	31½	1898–99	19
1876–77	25⅔	1899–1900	21
1877–78	20	1900–1901	23½
1878–79	21⅓	1901–2	24½
1879–80	28½	1902–3	23½
1880–81	24	1903–4	23⅓
1881–82	19½	1904–5	24½
1882–83	21	1905–6	23⅔

Age of boys received.

Age.	1904–5.	1905–6.
10 years	30	25
11 years	43	35
12 years	57	50
13 years	53	87
14 years	76	98
15 years	60	90
16 years	1	2
Total	320	387

Industrial Home for Girls, 1904–1906.

Cause of commitment during the past two years.

Causes.	Number.	Causes.	Number.
Disorderly conduct	78	Incorrigibility	7
Prostitution	57	Attempt at suicide	3
Grand larceny	1	Using indecent, immoral, obscene, and profane language	1
Petit larceny	15	Indecent exposure of person	1
Feloniously stealing	8	Gross lewdness and lascivious behavior	1
Willfully wayward and unmanageable	11	Unlawfully, maliciously, and wantonly unhitching a horse	1
Truancy	14	Delinquency	6
Vagrancy	1	Total	237
Lounging on streets	19		
Frequenting saloons	6		
Drunk and disorderly	5		
Assault and battery	2		

Arrested in houses of illfame	55
Had been inmates of State public school at Coldwater	8
Had been in orphan asylums, House of Good Shepherd, and other institutions	63
Had been mothers	8
Habit of drinking to intoxication	79
Born out of wedlock	12
Had been married	2
Born in houses of illfame	3
Addicted to the use of morphine, cigarettes, and tobacco	3
Total	237

Age of girls when received.

7 years	1	14 years	436
8 years	6	15 years	613
9 years	11	16 years	555
10 years	59	17 years	5
11 years	69		
12 years	149	Total	2,204
13 years	300		

Nativity of girls entered during the past two years.

Nativity.	Number.	Nativity.	Number.
United States	47	Poland	8
Canada	43	Finland	1
England	5	Sweden	4
Scotland	4	Denmark	1
Ireland	3	Syria	1
France	2	Unknown	91
Germany	20	Total	237
Holland	6		
Austria	1		

Parentage of girls entered during the past sixteen years.

Social condition.	Father.	Mother.	Both.	Total.
Divorced				666
Intemperate	653	165	85	818
Half orphaned	262	338		600
Orphaned			108	108
Prostitute		235		235
Deserted by	153	85	49	238
Criminal	44	34		78
Insane	8	22		30
Epileptic	3	5		8
Feeble-minded	4	9	2	13
Suicide	9	6		15
In prison	32	15		47
In county house	7	6		13

NEW JERSEY.

NEW JERSEY STATE HOME FOR BOYS.

Commitment and release of boys.

Year.	Committed.	Released.	Year.	Committed.	Released.
1867	26	.....	1888	108	126
1868	39	2	1889	144	122
1869	35	29	1890	122	190
1870	48	38	1891	136	219
1871	53	58	1892	94	143
1872	98	62	1893	118	136
1873	113	89	1894	114	165
1874	120	116	1895	117	161
1875	68	78	1896	125	169
1876	74	80	1897	91	152
1877	84	82	1898	148	155
1878	101	97	1899	119	164
1879	85	117	1900	118	173
1880	105	140	1901	109	137
1881	86	.....	1902	131	163
1882	130	97	1903	167	165
1883	130	143	1904	146	169
1884	87	156	1905	223	239
1885	108	150			
1886	120	147	Total	4,130	4,801
1887	90	172			

The excess in number of those released is accounted for by some boys having been returned and released more than once.

Age when committed (1905).

7 years	1	13 years	32
8 years	3	14 years	48
9 years	11	Over 15 years	54
10 years	17	Over 16 years	4
11 years	28		
12 years	25	Total	223

Home influence and moral condition (1905)

Parents separated	11	Have never used intoxicants	222
Have lost fathers	42	Have used tobacco	137
Have lost mothers	39	Have never used tobacco	86
Have lost both	24	Boys never arrested before	82
Have stepfathers	15	Boys arrested once before	141
Have stepmothers	22	Number of Protestants received	100
Have intemperate fathers	30	Number of Catholics received	112
Have intemperate mothers	9	Number of Hebrews received	6
Have used intoxicants	1	Never attended any church	5

NEW YORK.

As this reformatory is one of the best known, a brief résumé of the report for 1906 is given, and, as far as practicable, in the words of the report itself.

NEW YORK STATE REFORMATORY AT ELMIRA.

Demeanor record for year ending September 30, 1906.

	Population at end of month.	Perfect in demeanor during entire month.	Per cent.
October, 1905	1,439	997	0.693
November, 1905	1,454	1,019	.701
December, 1905	1,480	1,062	.717
January, 1906	1,499	1,075	.717
February, 1906	1,525	1,222	.801
March, 1906	1,531	1,179	.770
April, 1906	1,541	1,156	.750
May, 1906	1,436	1,210	.842
June, 1906	1,438	1,194	.830
July, 1906	1,378	1,111	.806
August, 1906	1,309	1,124	.859
September, 1906	1,315	1,101	.837
Average			.777

Only about 22 per cent were subjects in any way for disciplinary measures.

The population is divided into three grades. A newcomer enters the second grade, from which by good records he may advance to the first and by bad records fall back to the third. His record is made up of three kinds of monthly markings, viz, "Trade," "School of letters," and "Demeanor." The last-mentioned covers his every action not included in the other two.

Failure to attain a certain per cent in trade and school and demeanor makes a month imperfect, and only perfect months count for advancement.

Six perfect months in the second grade entitle him to advancement to the first grade and six perfect months in the first grade make him eligible to be considered for parole.

Two imperfect months in succession make him liable to reduction to the grade below, and one serious demeanor offense may cause reduction even from the first to the third grade. After reduction the climb upward begins over again.

Each citizen officer in the place carries printed slips, as follows:

N. Y. S. REFORMATORY.

Demeanor report of first class.

FINE
$

Time ———. Date ——— ——, 1906. Cons. No. ———. Grade ———. Name, ——— ———. Reporting officer, ——— ———.

Absent without excuse.	Insolence to officer.	Malicious mischief.
Assault or fight.	Larceny.	Malingering.
Crookedness.	Licentiousness.	Profanity or vulgarity.
Disobedience of orders.	Lying.	Threatening.
Damaging State property.	Malicious disturbance.	

Check off the offense in above list and in explanation give details as to time, place, etc., and if information is furnished by inmate officer, give name and number.

Explanation.....

Demeanor report of second class.

Altering clothing.	Inattention.	Sleeping dressed.
Assumption of authority.	Laughing and fooling.	Shirking.
Arms not folded at proper time.	Light burning at improper time.	Talking.
Carelessness.	Not rising at recitation.	Untidiness.
Clothing not in proper order.	Not properly equipped.	Unmilitary bearing or conduct.
Communicating by signs.	Not at door for count.	Utensils not in proper place.
Dilatory.	Out of place.	
Disorderly conduct.	Poor work.	
Exchanging library book with other inmates.	Quarreling.	
	Spitting.	

Check off the offense in the above list, etc.

If the reporting officer observes any misconduct or if a report of misconduct, which he believes well founded, is made to him by an inmate officer, he checks the offense on the proper slip and adds an explanation below.

If the report is first class, the accused is at once arrested and taken to the guardhouse, where he remains pending the investigation and disposition of the matter by the disciplinary officer. This may be only a few hours; it is never more than a few days.

Second-class reports are investigated without a preliminary arrest. A regular trial is given on all first-class reports. The statement of the accused is taken down in writing, as is also the testimony against him and any that is available in his favor. Then the disciplinary officer disposes of the matter by discharging the prisoner or imposing a fine. A single first-class report sustained by the disciplinary officer or four second-class reports make a month imperfect.

An appeal lies to the superintendent and from him to the board of managers.

Neither time nor trouble is spared to make these investigations thorough and impartial.

Many of these reports would seem rather trivial to any one outside the institution. Nothing of the kind is of slight importance there, for in the little world in which these persons live the rules of the institution takes the place of the supreme law of the land. By teaching them to obey these rules without question, implicitly and habitually, without regard to whether they deem them important or unimportant, reasonable or unreasonable, they are trained to obey the laws of the State when they get outside. The following table shows the number of such reports:

Reports issued during year ending September 30, 1906.

	Reports.		Total.
	First class.	Second class.	
October, 1905	272	2,355	2,627
November, 1905	279	2,255	2,534
December, 1905	210	2,411	2,621
January, 1906	233	2,309	2,542
February, 1906	207	2,315	2,522
March, 1906	216	2,607	2,823
April, 1906	215	2,459	2,674
May, 1906	199	2,283	2,482
June, 1906	227	2,076	2,303
July, 1906	265	2,263	2,528
August, 1906	217	2,242	2,459
September, 1906	180	1,994	2,174
Total	2,720	27,569	30,299
Average per day	7	75	

It will be seen that the number of first-class reports only averaged seven a day in an average population of 1,453. This means that only one-half of 1 per cent of the population did anything serious enough to send them to the guardhouse. Hardly enough to be appreciated in the general life of the place.

Those in the first and second grades are indiscriminately engaged in the military, trades school, school of letters, and the other activities of the institution. The third grade, however, is confined in a wing shut off by itself. When a prisoner drops into the third grade he disappears entirely from the sight of the general population, and thus ceases to exert a contaminating influence by his example. His cell is not inferior to the one he occupied before. His food, served in his cell, is the same as that supplied to the second grade. He has no society, however, but that of his own kind and nothing to do but scrub the floor, darn socks, and repair clothes. There is an abundance of this occupation. Thirty days of perfect behavior secures his release and restoration to the bottom of the second grade. Thirty days is enough for most of them, and they emerge much subdued in spirit, with a new appreciation of the enjoyment to be derived from participation in the general work of the institution.

Reduction to third grade during year ending September 30, 1906.

	Total number reduced.	Restored after 30 days.	Restored after 45 days.	Restored after 60 days.	Restored after 90 days.
October, 1905	33	32	1		
November, 1905	31	25	6		
December, 1905	32	29	2		1
January, 1906	29	29			
February, 1906	21	18	3		
March, 1906	37	37			
April, 1906	44	41	3		
May, 1906	16	16			
June, 1906	27	25		2	
July, 1906	17	16			1
August, 1906	36	30	4		2
September, 1906	20	20			
Total	343	318	19	2	4

It will be seen from the above table that reduction to this grade averaged less than one a day and that over 90 per cent of those reduced got out again in the minimum time.

This quarantining of the third grade has exerted a beneficial influence on the moral health of the institution.

There is still a lower depth to which a prisoner can go. The most serious class of offenses, like assaults or attempts to escape, or misbehavior in the third grade, are dealt with in a summary manner by solitary confinement in the "seclusion" cells.

These cells are not dark in the ordinary prison sense and their occupants are not put in irons.

With an average of nearly 78 per cent perfect in demeanor, with first-class reports averaging only seven a day, third-grade reductions less than one a day, and commitments to seclusion less than one a week and with the immediate removal of all serious offenders from the general population, the reformatory as a whole has been so quiet and orderly that the punitive kind of discipline was so nearly out of sight and out of mind that both officers and prisoners have been free to

devote almost exclusive attention to the other kind of discipline—"instruction in arts, sciences, correct sentiments, morals and manners, and due subordination to authority," with resultant "education, cultivation, and improvement."

The underlying principle of this system is very simple. A community of men can not live together unless each individual respects the person and property of the others. Those sent to Elmira have not done so—they have stolen or committed assaults, so they are excluded from their fellows for an indefinite period till they can learn to live as others do. Reformatory officials are employed to teach them this.

The reformatory community has its own code of laws much simpler than the penal code, but the underlying principle is still the same.

The prisoner on his introduction is made to understand why he has to be there and that the only way he can return to free life is by showing such ability to live orderly, peaceably, and honestly under institutional restraints as to render it probable that he will hereafter live orderly, peaceably, and honestly without them, and that, if he fails to submit to the laws that govern the general reformatory population, by an application of the same principle that brought him there he will be segregated still further, with the possibility, as a final result, of having to live entirely alone.

His subsequent instruction and training has this one end in view—to teach him how to live with other men.

The three things most essential in the management of a reformatory to which men come under an indeterminate sentence are:

(*a*) Proper grading; keeping those of a kind together and carrying the principle of segregation to its logical conclusion.

(*b*) Keeping the fact of the existence and the treatment of institutional offenses out of the minds of those not guilty of them. The great trouble with the ordinary criminal is that he is more readily influenced by the suggestion of bad conduct than by that of good conduct.

(*c*) Having fair-minded and even-tempered officers who themselves live the kind of clean and self-controlled lives that it is desired that the prisoner should attain to.

RATIO OF PROBABLE REFORMATION ON MEN PAROLED DURING THE FISCAL YEAR ENDING SEPTEMBER 30, 1906.

Total number paroled	1,016
Served well and earned absolute releases	348
Correspondence and good conduct maintained, the period of parole not having expired	530
Total	878

Or 86.4 per cent.

BIOGRAPHICAL COMPENDIUM.

These tables are compiled from information relating to 15,107 prisoners indefinitely sentenced.

Relating to parents of prisoners.

HEREDITY.

Insanity or epilepsy (in ancestry)	1,462 or 0.0967

DRUNKENNESS (IN ANCESTRY).

Clearly traced	4,516 or 0.2990
Doubtful	2,100 or .1390
Temperate	8,491 or .5620

EDUCATION.

Without	2,170 or 0.1436
Simply read and write	5,390 or .3568
Ordinary common school	6,796 or .4498
High school or more	751 or .0498

Relating to prisoners themselves.

EDUCATIONAL.

Without	2,289 or 0.1508
Simply read and write	6,754 or .4470
Common school	5,409 or .3580
High school or more	655 or .0440

INDUSTRIAL.

Servants and clerks	3,239 or 0.2144
Common laborers	8,543 or .5655
Mechanical work	2,589 or .1713
Idlers	736 or .0488

NOMINAL RELIGIOUS FAITH OR TRAINING.

Protestant	6,099 or 0.4037
Roman Catholic	7,075 or .4683
Hebrew	1,670 or .1105
None	263 or .0175

CHARACTER OF ASSOCIATIONS.

Not good	14,227 or 0.9417
Doubtful	482 or .0319
Good	398 or .0264

NATURE OF OFFENSES.

Against property	13,549 or 0.8968
Against person	1,425 or .0943
Against the peace	133 or .0089

AGE OF ADMISSION.

Between 16 and 20	8,088 or 0.5354
Between 20 and 25	5,445 or .3604
Between 25 and 30	1,574 or .1042

Condition of prisoners observed on admission.

PHYSICAL.

Debilitated or diseased	807 or 0.0534
Somewhat impaired	2,084 or .1379
Good health	12,216 or .8087

MENTAL.

Deficient	336 or 0.0222
Fair	2,634 or .1744
Good	11,474 or .7595
Excellent	663 or .0439

SPECIAL STATISTICS.

The following statistics have been secured from the physical examination of 5,000 inmates who have been admitted to the institution from November 3, 1900, to September 22, 1906, inclusive:

Average age	20¾ years.
Average height	5 feet 5½ inches.
Average weight	131¾ pounds.
Alcohol, intemperate	2,735 or 0.5470

Tobacco:		
Smoke	3,850	or 0.7700
Chew	900	or .1800
Drugs:		
Opium	60	or .0120
Cocaine	12	or .0025
Morphine	50	or .0100
Heredity:		
Tuberculosis	911	or .1823
Insanity	263	or .0525
Epilepsy	231	or .0462
Venereal diseases:		
Gonorrhœa	1,608	or .3216
Chancroids	306	or .0612
Syphilis	323	or .0650
Venereal warts	40	or .0080
Bubo (nonspecific)	125	or .0250
Injuries and disabilities	885	or .1750
Inguinal hernia	130	or .0260
Present symptoms—scabies	112	or .0225
Miscellaneous diseases and symptoms	950	or .1900
Father living	3,150	or .6300
Mother living	3,480	or .6960
Orphans	673	or .1346
Heart, organic disease	170	or .0340
Lungs, tubercular	875	or .1750
Eyes defective	675	or .1350
Hearing defective	281	or .0562
Teeth poor	2,050	or .4100
Mental condition defective	1,500	or .3000
General physical condition:		
Poor	1,331	or .2662
Fair	3,063	or .6125
Good	606	or .1212

NEW YORK CATHOLIC PROTECTORY, WESTCHESTER, N. Y. (1906).

The cases of 567 boys discharged about one year ago were investigated. There were—

Doing well	331
Doing fairly well	23
Doing poorly	3
Doubtful	52
Returned to the protectory	54
Committed to other institutions	29
Dead	2
Not found	73
Total	567

No matter what may have been the improvement in the children under training, discharges frequently must be made to parents or guardians living in bad surroundings, therefore it is not strange that the children sometimes relapse into their former state. The movement inaugurated to look after children discharged from institutions, to keep in touch with them and to encourage them in every possible way that they may persevere in good methods of life, will aid greatly institutions and confer untold benefit upon the children.

STATISTICS OF THE NEW YORK CATHOLIC PROTECTORY.

Received during the year ending September 30, 1906.

	Men over 21.	Women over 21.	Boys 16 to 21.	Girls 16 to 21.	Boys 5 to 16.	Girls 5 to 16.	Boys 2 to 5.	Girls 2 to 5.	Total.
By judicial commitment—for destitution	.....	.....	.....	.....	6	10	2	4	22
By judicial commitment—for delinquency	.....	.....	11	1	1,909	145	12	14	2,092
Received from superintendents of the poor and other poor-law officers	.....	.....	.....	.....	101	13	14	6	134
Received from parents and guardians—boarders	.....	.....	10	.....	118	27	9	4	168
Received free	.....	.....	1	1	9	1	1	1	14
Otherwise received	1	.....	18	10	148	16	.....	4	197
Total	1	.....	40	12	2,291	212	38	33	2,627

Discharged during the year ending September 30, 1906.

	Men over 21.	Women over 21.	Boys 16 to 21.	Girls 16 to 21.	Boys 5 to 16.	Girls 5 to 16.	Boys 2 to 5.	Girls 2 to 5.	Total.
Children placed in homes—placing out bureau	.....	3	57	26	103	22	.....	.....	211
Children sent to St. Philip's Home	.....	.....	12	.....	65	.....	.....	.....	77
Returned to parents or guardians	.....	.....	128	40	1,681	133	15	4	2,001
Left without permission	.....	.....	19	1	29	1	.....	.....	50
Transferred to other institutions	.....	.....	5	1	76	10	4	1	97
Otherwise discharged	1	1	12	8	115	25	13	6	181
Out of State	.....	.....	2	.....	19	4	1	.....	26
Died	.....	.....	1	.....	2	.....	.....	.....	3
Total	1	4	236	76	2,090	195	33	11	2,646

NEW YORK JUVENILE ASYLUM (1905).

Statistics of the families of children admitted.

Families in private houses	7
Families in flats	40
Families in tenements	128
Families in rear tenements	8
Families with no homes	19
Father working	125
Mother working	45
Both parents working	23
Neither working	15
Supported by women only	30
Both parents living	112
Both parents dead	10
Father dead	39
Mother dead	35
Father sick	8
Mother sick	6
Parents separated:	
With father	8
With mother	9
Stepfather	11
Stepmother	8
Length of time of parents in United States:	
Less than 5 years	8
Less than 10 years	9
Less than 20 years	40
Less than 30 years	50
Life	75
Number of rooms to one family:	
2 rooms	10
3 rooms	64
4 rooms	76
5 rooms	30
6 rooms	25
$5 rent	10
$10 rent	39
$15 rent	50
$20 rent	28
Houses:	
Clean, in good repair	70
Clean, in poor repair	51
Not clean, in good repair	54
Not clean, in poor repair	25

APARTMENTS—CLEANLINESS.

Good	75
Fair	100
Bad	24

LIGHT AND VENTILATION.

Good	90
Fair	86
Bad	34

Statistics of families applying for discharge of children.

[These do not include the 130 calls made by the U. H. C.]

Conditions unchanged	214
Conditions worse	40
Conditions better	184

CAUSE OF WORSE CONDITION.

Less work	15
Sickness	12
Death	13
Total	40

CAUSE OF BETTER CONDITION.

More work	30
Better work	34
Better health	25
Parents reunited	10
Stepfather	12
Stepmother	10
Children old enough to work	53
Total	184

The following are the statistics relating to children who were discharged to their friends in 1903, after at least a twelve months' stay in the institution.

Only children in the Borough of Manhattan have been visited.

At school	78
At work	75
Not working	15
In institutions	40
Died	1
Not found	45
Total	254

Of children found, 74 per cent were doing well.

Committed, recommitments, discharged, and escapes during the years 1853–1905.

Year.	Committed.	Recommitments.	Discharged.	Escapes.	Year.	Committed.	Recommitments.	Discharged.	Escapes.
1853	623	6	421	33	1880	577	72	636	1
1854	1,050	55	954	137	1881	670	66	703	1
1855	727	101	935	72	1882	672	54	665	4
1856	902	114	851	104	1883	711	57	654	.....
1857	741	124	685	126	1884	653	65	703	.....
1858	781	104	727	121	1885	640	70	611	2
1859	963	126	613	19	1886	649	79	655	1
1860	963	59	816	33	1887	666	65	696	4
1861	900	47	847	15	1888	687	59	668	1
1862	957	109	1,005	5	1889	638	61	702	1
1863	1,160	234	1,106	12	1890	614	72	567	2
1864	888	139	905	11	1891	646	72	655	1
1865	812	98	795	6	1892	624	71	563	2
1866	853	119	847	3	1893	569	56	548	1
1867	922	152	854	5	1894	599	56	617	1
1868	854	126	826	1	1895	541	47	633	2
1869	926	152	966	3	1896	692	46	680	2
1870	714	143	717	6	1897	916	67	821	1
1871	572	112	517	3	1898	963	81	959	3
1872	546	91	638	.....	1899	905	112	1,006	12
1873	561	53	565	1	1900	1,073	124	1,140	12
1874	687	93	656	1	1901	1,020	167	929	6
1875	632	76	646	1	1902	961	134	957	5
1876	602	95	652	3	1903	644	79	584	14
1877	566	56	576	1	1904	756	56	642	8
1878	566	67	566	1	1905	955	27	902	.....
1879	499	59	562	.....					

Percentages of admissions.

Year.	England.	Scotland.	Ireland.	Germany.	France.	Russia.	Poland.	Italy.	Turkey and Syria.	West Indies.
1853	4.65	1.61	28.66	5.94	0.16	.....	0.32	0.16	.....	0.32
1854	2.86	.76	29.33	4.19	.19	.....	.19	.57	.....	.19
1855	3.58	1.38	27.65	6.19	.14	.....	.14	.55	.....	.14
1856	3.77	.55	21.51	4.10	.89	.....	.....	.11	.....	.33
1857	5.80	.54	25.64	4.99	.40	.....	.....	.54	.....	.....
1858	3.59	1.28	22.02	4.87	.51	.....	.....	.13	.....	.....
1859	3.94	1.62	16.80	5.56	.35	.....	.....	.81	.....	.12
1860	5.33	1.39	15.30	4.75	.35	.....	.....	.70	.....	.23
1861	4.62	1.00	9.62	4.72	.25	.....	.....	1.50	.....	.25
1862	3.34	1.15	7.73	3.87	.25	.....	.10	.31	.....	.....
1863	3.62	1.29	4.14	2.84	.43	.....	.34	.09	.....	.....
1864	2.25	.68	2.93	3.04	.23	0.11	.23	.11	0.11	.....
1865	3.20	1.23	3.45	3.69	.37	.....	.12	.25	.....	.....
1866	3.73	.59	3.28	1.76	.47	.....	.35	.....	.....	.....
1867	2.27	.11	1.96	3.47	.43	.11	.11	.32	.....	.11
1868	1.76	.23	2.11	2.93	.47	.....	.....	.32	.....	.....
1869	3.15	.12	1.69	3.75	.24	.12	.....	.48	.....	.24
1870	3.78	.28	1.68	3.92	.28	.14	.14	.28	.....	.....
1871	3.67	.17	2.97	5.42	.35	.....	.....	.70	.....	.18
1872	4.94	.37	3.66	4.39	.55	.....	.18	.73	.....	.....
1873	1.55	.34	.86	5.68	1.55	.34	.17	1.03	.17	.....
1874	3.20	1.02	1.89	4.22	.73	.....	.29	2.33	.....	.....
1875	3.48	1.42	2.37	4.91	2.21	.....	.63	.60	.....	.....
1876	3.86	1.00	1.62	6.11	.87	.....	.25	1.50	.....	.....
1877	3.74	.34	1.36	2.55	1.19	.....	.....	.....	.....	.34
1878	3.91	.17	.68	4.42	.34	.17	.....	.34	.....	.....
1879	2.33	.....	.36	1.97	.90	.35	.36	.....	.....	.36
1880	1.56	.35	.35	1.56	.52	.....	.17	1.04	.....	.....
1881	2.69	.15	.59	4.33	.75	.....	.59	1.64	.....	.45
1882	2.53	.30	.30	5.65	.71	.45	.15	4.46	.....	.30
1883	1.55	.14	1.55	4.36	.14	.56	.42	6.61	.....	.....
1884	2.13	.61	.31	5.21	.46	.15	.61	8.11	.....	.15
1885	1.40	1.86	1.25	7.34	.31	.31	1.09	6.56	.....	.16
1886	1.08	.46	.15	8.47	.15	1.54	.77	5.86	.....	.15
1887	2.29	.43	.43	4.44	.43	.57	1.15	12.04	.....	.72
1888	3.35	.73	.44	7.42	.73	3.06	.87	10.19	.....	.....
1889	2.98	1.45	.33	9.87	.29	2.19	1.16	7.12	.31	.29
1890	2.48	.77	.62	9.29	.31	2.17	.77	16.72	.....	.....
1891	1.95	.49	.65	5.21	.49	4.89	.49	16.12	.....	.....
1892	3.06	.48	.64	6.57	.48	5.45	.64	9.94	1.01	.....
1893	2.28	1.41	.35	5.10	.53	5.98	.88	12.65	2.64	.18
1894	3.34	.33	1.00	6.68	.....	8.51	1.17	9.51	2.84	.17
1895	3.33	.74	.55	3.51	.55	11.83	.74	9.24	.74	.74
1896	1.16	.58	.58	3.61	.72	9.97	.29	16.91	2.02	.43
1897	.76	.55	.21	3.82	.44	12.44	.22	21.29	2.62	.....
1898	2.44	.71	.31	2.34	.31	15.89	.41	16.90	1.32	.41
1899	2.21	.....	.33	2.87	.11	18.78	.22	9.28	1.88	.....
1900	1.77	.18	.09	1.67	.18	20.78	.37	3.35	.65	.65
1901	1.78	.09	.39	1.37	.39	16.47	.19	1.47	.29	.29
1902	1.05	.58	.11	1.85	.23	16.49	.....	1.05	.11	.46
1903	1.09	.62	.15	1.86	.15	10.87	.15	.....	.....	.15
1904	1.98	.13	.13	1.19	.....	10.95	.....	.13	.....	.....
1905	.96	.15	.38	2.64	.....	2.64	.38	.38	.....	.....

Habits when committed.

Year.	Unfortunate.				Pilfering.				Vagrant.				Bad and disorderly.			
	White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1853	5	.....	.....	.....	102	3	1	.....	479	9	9	.....	8	.....	.....	.....
1854	90	43	6	1	257	24	5	1	392	45	17	1	108	45	2	2
1855	93	53	5	2	177	13	2	2	145	20	10	2	96	25	3	.....
1856	70	27	3	2	243	30	9	.....	182	45	3	3	165	29	5	4
1857	160	47	7	.....	159	7	3	.....	88	5	8	1	138	33	3	1
1858	171	70	6	1	120	10	3	.....	93	10	3	.....	109	47	8	2
1859	127	79	5	1	151	8	6	1	113	5	7	.....	187	32	10	4
1860	129	63	7	7	111	9	2	1	166	20	4	.....	73	11	4	4
1861	166	70	9	3	106	10	6	.....	88	21	3	.....	.....	.....	.....	.....
1862	136	74	9	1	76	6	2	.....	167	25	9	1	.....	.....	.....	.....
1863	170	80	6	4	148	9	4	2	153	20	4	1	.....	.....	.....	.....
1864	139	76	4	1	84	13	2	.....	45	9	2	.....	77	11	4	3
1865	135	57	6	2	75	10	2	2	52	15	4	2	44	6	2	1
1866	193	72	5	1	80	5	2	2	53	9	.....	1	13	2	.....	.....
1867	159	66	2	.....	120	9	1	.....	38	16	.....	.....	.....	.....	.....	.....
1868	165	96	4	.....	80	4	.....	.....	40	7	1	1	.....	.....	.....	.....
1869	185	74	4	2	64	4	4	.....	8	1	.....	1	.....	.....	.....	.....
1870	173	62	13	1	32	6	1	.....	4	1	.....	.....	1	.....	.....	.....
1871	134	41	5	3	21	3	3	.....	7	2	.....	.....	1	.....	.....	.....
1872	109	33	5	4	35	3	.....	1	10	2	.....	.....	1	.....	.....	.....
1873	150	43	4	1	49	8	2	.....	5	2	.....	.....	.....	.....	.....	.....
1874	166	65	1	.....	44	6	1	.....	19	5	.....	.....	.....	.....	.....	.....
1875	175	58	2	.....	23	2	.....	.....	15	4	1	1	.....	.....	.....	.....
1876	294	90	2	1	17	5	.....	.....	31	13	.....	.....	2	.....	.....	.....
1877	129	42	1	1	15	4	.....	.....	26	5	3	1	.....	.....	.....	.....
1878	153	66	1	1	24	2	.....	.....	24	5	1	1	4	.....	.....	.....
1879	161	62	4	2	3	5	1	.....	10	4	1	.....	.....	.....	.....	.....
1880	179	60	1	4	15	7	.....	.....	11	.....	2	1	.....	.....	.....	.....
1881	189	80	3	5	31	1	2	.....	14	1	2	.....	.....	.....	.....	.....
1882	162	83	5	1	26	5	1	.....	13	.....	1	.....	.....	.....	.....	.....
1883	180	72	5	4	12	3	1	.....	18	8	2	.....	.....	.....	.....	.....
1884	191	77	7	2	12	1	1	1	21	8	4	2	.....	.....	.....	.....
1885	200	67	13	7	15	1	.....	1	18	4	3	.....	.....	.....	.....	.....
1886	162	93	11	14	22	4	2	.....	16	3	5	1	.....	.....	.....	.....
1887	190	80	18	16	25	3	2	3	20	1	4	1	.....	.....	.....	.....
1888	184	88	4	8	33	6	.....	.....	21	4	3	.....	.....	.....	.....	.....
1889	149	60	14	9	37	3	2	1	22	1	3	1	.....	.....	.....	.....
1890	141	50	17	9	31	6	5	.....	30	1	1	.....	.....	.....	.....	.....
1891	115	55	5	3	55	5	4	4	14	1	2	.....	.....	.....	.....	.....
1892	128	57	13	6	72	4	5	1	26	2	2	.....	.....	.....	.....	.....
1893	130	52	8	6	56	5	5	1	14	2	.....	.....	.....	.....	.....	.....
1894	188	76	12	6	52	5	4	.....	11	1	2	.....	1	.....	.....	.....
1895	172	84	10	5	37	3	2	.....	3	.....	.....	.....	18	.....	1	.....
1896	203	100	22	14	27	1	2	.....	2	1	.....	.....	93	.....	2	.....
1897	282	190	23	12	35	.....	.....	.....	1	.....	1	.....	193	.....	6	.....
1898	257	143	14	8	43	2	.....	1	.....	.....	.....	.....	302	.....	13	.....
1899	156	106	9	9	28	1	1	.....	.....	.....	.....	.....	384	.....	23	.....
1900	137	79	12	14	33	2	3	.....	.....	.....	.....	.....	563	1	25	.....
1901	135	94	10	5	74	3	7	1	9	2	1	.....	383	5	26	1
1902	198	75	10	5	82	5	4	.....	5	1	.....	.....	293	2	12	1
1903	139	78	13	6	109	.....	3	1	7	1	.....	.....	77	.....	9	.....
1904	195	115	11	7	85	9	3	1	9	1	1	.....	77	1	5	.....
1905	67	16	.....	.....	40	.....	.....	.....	7	.....	.....	.....	40	.....	.....	.....
Total	8,366	3,739	396	227	3,503	303	121	28	2,765	368	129	23	3,511	250	163	23

Habits when committed—Continued.

Year.	Beggars.				Peddling.		Disobedient and truant.				Temporary, as witnesses.				Total.
	White.		Colored.		White.		White.		Colored.		White.		Colored.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1853							7								623
1854	2						9								1,050
1855	25	29					24	1							727
1856	14	34					29				4	1			902
1857	17	28	1				32		1		2				741
1858	8	34					24		1		1				781
1859	29	47	1				45	4				1			863
1860	29	36	1				165	11	8	2					863
1861	14	12					243	28	13	8					800
1862	10	20					377	29	13	2					957
1863	18	8		1			460	58	10	4					1,160
1864	1	2					378	31	2	3	1				888
1865							349	39	6	3					812
1866		1					350	48	8	2					853
1867	1						443	54	9	4					922
1868	1						389	42	15	9					854
1869		1					416	47	8	7					826
1870							348	54	12	6					714
1871							309	33	7	3					572
1872							304	28	7	4					546
1873	1						270	31	10	5					581
1874	3	1					315	48	8	5					687
1875	1						308	37	4	1					632
1876	2	4	2				296	29	12	2					802
1877	1						316	32	8	4					588
1878	2	2					259	33	10						588
1879	4						265	25	9	2					558
1880							255	31	11						577
1881	5	3	2				280	36	14	2					670
1882	4	3	1				304	40	16	7					672
1883	7						316	57	21	4	1				711
1884	6	3					258	39	17	3					653
1885	5	5			10	3	241	27	17	3					640
1886	5	3			5	1	236	16	30	10	9		1		649
1887	4	2			9	1	241	39	27	9	1		1	1	698
1888	11			1	8	2	231	32	35		3	1	1		687
1889	4	3			2	3	225	31	42	8	14	4			636
1890	9				5		269	35	17	19	1				644
1891	7			1	2		244	56	21	18	2				614
1892	8	1			3		227	34	26	7	1	1			629
1893	1						232	34	17	6					569
1894	4				3		186	22	19	7					591
1895	2				2		164	12	21	5					542
1896	3				1		177	29	9	6					696
1897							143	12	17						913
1898					4		165	18	11	2					988
1899	5						138	13	22	10					905
1900	2						151	19	26	5	1				1,073
1901							201	27	26	10					1,020
1902	1						130	13	14	10					861
1903							152	17	22	10					644
1904							182	21	19	16					758
1905							90		1	3	1				265
Total	276	282	8	3	55	10	12,174	1,452	699	267	42	8	3	1	39,195

Unfortunate, 12,728; pilfering, 3,955; vagrant, 3,285; bad, 3,947; beggars, 569; peddling, 65; disobedient and truant, 14,592; temporary as witnesses, 54—total, 39,195.

TABLE 3.—*Ages when committed.*

Year.	8 years and under.				9 years.				10 years.				11 years.			
	White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1853	64	.....	1	.....	51	4	1	.....	96	3	2	.....	110	3	1	.....
1854	97	39	6	1	77	19	2	.....	149	21	7	2	123	20	2	.....
1855	72	29	2	1	53	19	1	.....	103	24	3	.....	86	19	4	1
1856	74	33	3	.....	49	16	.....	.....	78	17	1	1	104	20	3	3
1857	23	13	.....	.....	46	12	1	.....	62	12	1	1	70	15	7	.....
1858	37	18	.....	.....	38	15	1	.....	42	9	3	.....	66	20	1	.....
1859	82	46	3	1	53	28	3	1	88	16	4	.....	80	17	2	.....
1860	85	42	3	3	57	19	2	1	93	19	4	2	95	18	2	2
1861	111	33	6	4	65	18	11	3	79	17	3	1	89	12	3	2
1862	106	50	5	.....	75	19	1	.....	147	21	4	.....	104	15	4	1
1863	150	36	4	2	90	28	1	2	176	20	1	4	140	19	4	1
1864	129	43	1	.....	86	11	3	.....	96	15	.....	1	117	15	1	.....
1865	104	29	2	1	78	14	2	.....	107	17	1	2	83	14	4	2
1866	117	41	1	.....	65	21	.....	1	83	17	3	.....	102	16	2	1
1867	118	46	1	.....	88	7	2	.....	100	15	2	.....	107	13	2	.....
1868	134	46	1	.....	79	12	4	2	84	12	1	1	83	19	6	2
1869	132	39	4	1	76	13	1	.....	87	16	2	2	96	11	2	.....
1870	100	29	6	1	63	19	3	.....	86	17	1	1	74	15	4	.....
1871	75	15	1	.....	61	6	1	.....	80	12	1	1	79	12	5	1
1872	60	23	2	.....	61	8	1	2	62	4	4	.....	65	8	2	2
1873	80	25	2	.....	48	7	1	.....	81	10	1	4	54	8	1	.....
1874	87	35	.....	.....	67	12	2	.....	74	21	2	1	68	13	2	1
1875	90	36	1	.....	65	13	1	.....	69	11	1	1	67	10	.....	.....
1876	117	51	2	.....	84	22	2	.....	104	12	2	.....	104	16	4	1
1877	67	19	3	.....	61	9	1	.....	73	11	1	1	83	14	1	2
1878	68	26	1	.....	52	19	1	.....	59	21	.....	.....	77	14	1	.....
1879	74	37	4	.....	56	10	4	.....	73	19	2	.....	71	12	.....	1
1880	89	30	1	.....	53	12	5	1	76	12	5	2	77	17	1	2
1881	86	41	3	1	78	17	4	1	74	15	4	1	82	10	5	.....
1882	109	35	7	.....	64	23	3	1	85	19	2	2	73	13	6	.....
1883	113	45	6	2	73	22	2	.....	88	20	4	.....	78	17	4	3
1884	94	38	7	2	64	26	5	.....	91	9	6	1	76	17	4	.....
1885	105	27	7	2	64	19	3	.....	73	10	6	1	64	14	4	3
1886	72	34	5	4	68	14	10	1	67	21	3	4	59	13	6	5
1887	98	29	9	5	76	19	5	3	75	22	10	3	62	16	6	6
1888	86	33	5	2	62	15	6	1	65	12	7	3	69	19	4	3
1889	75	25	8	5	56	12	7	2	72	16	8	1	50	8	7	4
1890	96	19	6	.....	48	15	5	3	58	12	10	1	84	11	5	2
1891	53	28	4	1	49	17	.....	6	57	10	6	.....	57	15	6	4
1892	67	25	1	3	46	9	5	.....	58	8	6	.....	69	14	2	3
1893	75	28	5	5	47	14	2	.....	52	11	.....	1	64	8	6	.....
1894	62	30	3	2	47	11	6	1	68	16	6	.....	55	10	6	5
1895	71	38	5	1	46	12	5	3	52	10	6	1	51	10	7	2
1896	84	44	9	8	53	25	3	1	64	18	5	2	64	15	4	2
1897	132	90	0	2	60	35	6	4	59	33	2	2	81	16	8	1
1898	126	83	17	3	62	19	3	1	89	21	6	2	82	14	4	1
1899	76	54	4	4	57	20	1	3	74	12	2	2	75	11	5	2
1900	90	39	3	8	53	10	3	3	98	8	7	2	96	10	8	.....
1901	86	60	.....	1	47	10	3	.....	59	10	8	1	102	12	6	2
1902	98	46	0	2	38	8	5	1	66	9	1	2	84	7	5	1
1903	66	40	7	2	20	8	1	1	35	5	4	.....	59	11	3	2
1904	82	53	3	2	29	10	2	.....	43	12	.....	.....	72	17	7	1
1905	28	13	.....	.....	15	.....	.....	.....	18	.....	.....	.....	22	.....	.....	.....
Total	4,672	1,906	190	82	3,119	802	153	49	4,156	760	181	60	4,204	713	201	77

TABLE 3.—*Ages when committed*—Continued.

Year.	12 years.				13 years.				14 years and over.				Total.
	White.		Colored.		White.		Colored.		White.		Colored.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1853	110	.....	2	.....	104	1	2	.....	66	.....	1	.....	623
1854	189	25	4	1	120	21	7	1	103	12	2	.....	1,050
1855	91	23	5	1	88	16	2	1	67	11	3	2	727
1856	126	28	8	1	120	24	2	2	108	27	3	2	902
1857	79	9	3	1	112	13	2	.....	204	46	9	.....	741
1858	58	12	4	.....	103	19	6	.....	242	78	6	3	781
1859	95	23	3	.....	128	18	6	3	126	28	8	1	863
1860	109	17	6	3	103	15	4	2	131	20	5	1	863
1861	93	16	3	2	80	17	3	3	96	21	7	2	800
1862	130	18	8	1	94	14	4	2	110	17	7	.....	957
1863	150	20	6	.....	147	26	3	1	96	26	5	2	1,106
1864	100	18	4	1	118	18	1	2	83	18	4	3	888
1865	117	20	5	1	90	8	3	3	86	15	3	1	812
1866	109	13	6	1	105	11	1	1	116	18	2	.....	853
1867	139	17	1	3	101	18	1	2	108	29	2	.....	922
1868	99	19	1	1	97	22	4	.....	99	19	3	4	851
1869	97	14	3	3	85	10	4	1	100	24	.....	3	826
1870	66	.....	2	1	78	16	.....	3	90	20	6	13	714
1871	62	10	3	1	59	5	1	2	54	17	4	4	572
1872	84	8	1	2	65	10	1	7	55	6	2	1	546
1873	70	7	2	.....	72	12	5	1	71	14	1	4	581
1874	80	20	1	1	80	7	.....	.....	83	23	3	4	687
1875	83	8	1	1	73	10	3	1	78	8	1	.....	632
1876	88	18	2	.....	77	13	2	3	62	15	.....	1	802
1877	91	11	3	2	80	10	3	.....	34	7	.....	1	588
1878	85	12	5	.....	77	12	4	.....	47	6	1	.....	588
1879	72	7	.....	.....	67	8	5	2	29	3	1	1	558
1880	69	6	3	.....	67	13	.....	.....	29	7	.....	.....	577
1881	87	19	2	3	64	14	3	.....	46	5	4	1	670
1882	77	20	3	2	66	16	3	1	34	6	1	1	672
1883	82	17	7	2	69	14	5	1	31	5	1	.....	711
1884	72	17	4	4	67	16	2	.....	23	6	1	1	653
1885	69	12	4	2	70	12	6	3	44	13	3	.....	640
1886	82	10	11	2	56	14	10	5	52	13	5	3	649
1887	65	14	8	3	68	13	8	5	46	13	6	5	698
1888	72	16	7	1	70	21	7	5	67	17	7	5	687
1889	75	18	9	1	56	12	8	2	69	14	14	4	638
1890	66	7	4	10	62	9	7	2	72	19	3	10	646
1891	73	10	4	3	60	16	7	7	90	21	5	5	614
1892	77	7	7	4	54	12	11	2	94	24	12	2	624
1893	73	10	5	2	63	10	4	4	59	12	8	1	569
1894	75	14	2	.....	76	9	6	2	62	14	8	3	599
1895	71	10	4	1	50	8	2	.....	57	11	5	2	541
1896	68	9	5	3	64	9	6	2	109	11	3	2	692
1897	100	16	6	1	79	7	6	2	144	5	9	.....	916
1898	130	10	.....	1	108	8	7	1	174	8	11	2	983
1899	112	9	4	1	103	2	22	4	215	12	16	3	905
1900	144	6	14	2	120	8	9	1	286	20	22	3	1,073
1901	132	10	10	3	102	12	14	3	274	17	29	7	1,020
1902	107	5	2	1	101	5	9	4	215	16	18	5	861
1903	75	5	11	1	73	9	11	3	156	18	10	8	644
1904	66	12	5	4	75	8	7	3	181	35	15	14	758
1905	32	1	.....	.....	33	.....	1	.....	97	.....	2	3	205
Total	4,823	683	233	85	4,399	651	260	105	5,310	871	307	143	39,195

Eight years and under, 6,850; 9 years, 4,123; 10 years, 5,157; 11 years, 5,195; 12 years, 5,824; 13 years, 5,415; 14 years and over, 6,631; total, 39,195.

Education previous to commitment.

Year.	No. 1—Could read, write, and cipher.				No. 2—Could read and write.			
	White.		Colored.		White.		Colored.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
1853	16	2	.....	.....	65	2	.....	.....
1854	10	3	.....	.....	147	25	3	1
1855	59	17	2	.....	36	12	1	.....
1856	160	20	.....	.....	53	9	2	1
1857	167	22	3	.....	21	10	1	.....
1858	166	46	5	2	25	9	3	.....
1859	186	31	4	1	44	14	5	.....
1860	110	14	2	2	81	14	2	1
1861	72	6	1	.....	66	18	5	.....
1862	176	10	3	1	55	10	1	.....
1863	350	45	8	5	29	8	1	1
1864	242	30	1	3	41	9	2	.....
1865	251	45	3	3	40	7	3	2
1866	280	34	4	2	52	13	3	1
1867	298	48	2	2	25	2	.....	1
1868	258	64	9	7	21	3	.....	.....
1869	298	38	6	5	62	9	1	.....
1870	204	35	11	3	48	7	1	.....
1871	191	29	8	2	48	7	.....	.....
1872	249	19	3	3	49	6	3	1
1873	241	31	5	3	46	13	1	2
1874	251	36	7	3	86	18	1	.....
1875	253	31	3	1	87	14	1	1
1876	328	46	7	4	106	25	1	.....
1877	245	36	4	1	75	14	.....	2
1878	275	51	9	.....	63	14	.....	1
1879	263	31	4	4	53	14	1	.....
1880	241	45	6	3	49	7	1	.....
1881	310	46	14	3	43	13	1	1
1882	261	59	13	6	54	10	1	1
1883	267	54	12	3	56	15	5	2
1884	260	55	11	4	37	9	1	.....
1885	288	53	21	7	22	12	2	1
1886	282	61	29	17	26	4	3	1
1887	285	66	33	17	25	1	5	1
1888	308	77	28	15	17	4	4	.....
1889	314	63	38	13	12	3	5	2
1890	333	57	32	26	4	2	.....	.....
1891	315	57	23	21	1	3	.....	1
1892	329	54	40	11	2	.....	.....	.....
1893	286	48	24	8	6	.....	.....	.....
1894	333	57	25	10	3	2	.....	.....
1895	296	48	20	5	14	7	3	1
1896	339	58	19	11	27	7	3	.....
1897	406	59	32	8	60	16	5	.....
1898	553	48	25	6	47	16	5	1
1899	554	41	47	12	33	10	5	3
1900	749	52	54	9	36	10	5	0
1901	690	69	67	16	16	1	1	.....
1902	588	51	37	14	17	2	1	.....
1903	403	52	39	14	12	.....	2	2
1904	449	92	35	22	10	2	.....	.....
1905	211	.....	3	3	4	.....	.....	.....
Total	15,249	2,242	841	341	2,157	462	100	35

Education previous to commitment—Continued.

Year.	No. 3—Could read only.				No. 4—Could not read.				Total.
	White.		Colored.		White.		Colored.		
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
1853	176	2	4	.....	345	5	6	.....	623
1854	220	42	9	2	481	87	18	2	1,050
1855	150	38	6	2	315	75	10	4	727
1856	130	45	6	2	364	92	12	6	902
1857	120	32	2	1	288	56	17	1	741
1858	113	25	1	.....	283	91	11	1	781
1859	118	27	3	1	304	104	17	4	863
1860	148	26	3	2	334	96	19	9	863
1861	173	37	6	2	302	81	23	8	800
1862	268	39	7	3	267	95	22	.....	957
1863	286	53	8	3	284	69	7	3	1,160
1864	211	47	4	1	240	51	4	2	888
1865	156	35	6	2	209	39	8	3	812
1866	147	45	5	1	216	45	3	2	853
1867	218	41	5	1	220	54	4	1	922
1868	201	31	5	3	195	51	6	.....	854
1869	178	34	5	3	135	46	4	2	826
1870	149	33	7	1	157	48	7	3	714
1871	152	26	4	3	85	13	1	.....	572
1872	105	21	3	3	53	23	4	1	546
1873	93	13	7	2	97	26	1	.....	581
1874	126	30	2	.....	90	34	2	1	687
1875	108	27	2	.....	75	28	1	.....	632
1876	102	38	5	.....	105	33	2	.....	802
1877	92	15	2	.....	79	18	4	1	588
1878	74	16	1	1	61	20	2	.....	588
1879	62	18	4	.....	65	35	4	.....	558
1880	83	17	6	1	86	29	2	1	577
1881	63	21	4	1	102	41	5	2	670
1882	67	10	4	.....	127	52	6	1	672
1883	92	28	6	1	119	43	6	2	711
1884	62	18	5	1	128	47	12	3	653
1885	65	12	3	1	114	30	7	2	640
1886	42	10	9	4	105	45	8	3	649
1887	38	6	8	3	142	49	10	9	698
1888	40	11	7	3	126	41	4	2	687
1889	27	9	7	1	100	30	11	3	636
1890	26	5	2	1	123	28	6	1	644
1891	21	2	2	.....	102	55	7	4	614
1892	27	6	4	.....	107	39	2	3	629
1893	28	1	3	.....	113	44	3	5	569
1894	13	9	2	.....	96	36	10	3	591
1895	8	3	3	2	80	41	8	2	542
1896	17	8	2	1	123	58	11	8	696
1897	16	11	1	1	173	116	9	3	913
1898	14	7	.....	1	157	92	8	3	988
1899	7	4	.....	.....	117	65	3	4	905
1900	8	4	1	1	94	35	6	9	1,073
1901	9	5	2	.....	87	56	.....	1	1,020
1902	16	3	1	.....	88	40	1	2	861
1903	11	3	4	.....	58	41	2	1	644
1904	19	3	.....	.....	70	50	4	2	758
1905	5	1	.....	.....	25	13	.....	.....	265
Total	4,900	1,053	208	62	8,411	2,631	370	133	39,195

No. 1, 18,673; No. 2, 2,754; No. 3, 6,223; No. 4, 11,545; total, 39,195.

Habits of parents.

Year.	Both whose parents were temperate.	One or both whose parents were intemperate.	Unknown.	Total.
1853	236	331	56	623
1854	407	446	197	1,050
1855	397	295	35	727
1856	472	396	34	902
1857	396	324	21	741
1858	440	307	34	781
1859	470	356	37	863
1860	545	277	41	863
1861	563	232	5	800
1862	703	254	.....	957
1863	913	231	16	1,160
1864	722	152	14	888
1865	673	78	61	812
1866	667	124	62	853
1867	800	122	.....	922
1868	739	97	18	854
1869	588	110	16	714
1870	647	161	18	826
1871	475	79	18	572
1872	476	66	4	546
1873	505	70	6	581
1874	600	83	4	687
1875	574	55	3	632
1876	684	108	10	802
1877	545	35	8	588
1878	537	46	5	588
1879	510	35	13	558
1880	522	47	8	577
1881	609	47	14	670
1882	590	73	9	672
1883	625	70	16	711
1884	557	83	13	653
1885	573	58	9	640
1886	563	78	8	649
1887	617	72	9	698
1888	610	67	10	687
1889	593	39	6	638
1890	611	32	3	646
1891	592	21	1	614
1892	593	27	4	624
1893	546	20	3	569
1894	558	37	4	599
1895	495	45	1	541
1896	660	26	6	692
1897	877	37	2	916
1898	928	49	6	983
1899	863	35	7	905
1900	1,025	37	11	1,073
1901	947	55	18	1,020
1902	787	33	41	861
1903	573	41	30	644
1904	668	44	46	758
1905	234	18	13	265
Total	32,100	6,061	1,034	39,195

Whether parents are living.

Year.	Both parents living.	Father only living.	Mother only living.	Both parents dead.	Unknown.	Total.
1853	230	122	164	106	1	623
1854	323	210	238	185	94	1,050
1855	275	114	195	129	14	727
1856	374	124	241	152	11	902
1857	316	114	185	117	9	741
1858	342	114	213	103	9	781
1859	396	112	251	84	20	863
1860	373	125	256	90	19	863
1861	387	106	228	70	9	800
1862	449	141	264	96	7	957
1863	557	180	331	88	4	1,160
1864	424	121	272	66	5	888
1865	367	124	228	91	2	812
1866	378	118	231	123	3	853
1867	400	151	294	77	.....	922
1868	368	151	256	79	.....	854
1869	381	144	227	74	.....	826
1870	320	136	205	51	2	714
1871	253	95	169	45	10	572
1872	246	94	161	36	9	546
1873	232	101	205	41	2	581
1874	271	129	233	44	10	687
1875	240	133	205	39	15	632
1876	310	178	252	47	15	802
1877	202	121	213	33	19	588
1878	220	117	198	36	17	588
1879	189	135	186	38	10	558
1880	218	125	193	33	8	577
1881	280	144	202	31	13	670
1882	256	150	210	41	15	672
1883	310	150	215	25	11	711
1884	282	139	194	25	13	653
1885	240	153	198	40	9	640
1886	273	131	193	34	18	649
1887	297	166	176	51	8	698
1888	286	149	193	46	13	687
1889	282	116	174	54	12	638
1890	330	108	149	54	5	646
1891	313	117	147	30	7	614
1892	285	121	168	39	11	624
1893	269	114	157	25	4	569
1894	291	118	151	30	9	599
1895	246	115	151	28	1	541
1896	371	118	160	39	4	692
1897	541	128	202	44	1	916
1898	686	95	164	33	5	983
1899	591	100	171	36	7	905
1900	742	114	180	31	6	1,073
1901	648	122	211	24	15	1,020
1902	547	100	151	34	29	861
1903	370	108	114	24	28	644
1904	422	122	138	39	37	758
1905	156	44	49	11	5	265
Total	18,355	6,677	10,512	3,041	610	39,195

NEW YORK STATE TRAINING SCHOOL FOR GIRLS, HUDSON, N. Y.

In general, all girls between the ages of 12 and 16 convicted of any form of juvenile delinquency may be committed to this institution. Among the principal offenses enumerated in the statutes are frequenting the company of thieves or prostitutes, or being found associated with vicious and dissolute persons, willful disobedience to parents or guardians, intemperate habits, vagrancy, any criminal offense, begging or receiving or soliciting alms, having been abandoned or improperly exposed or neglected by parents or other person or persons in parental control, being in concert saloons, dance houses, theaters, or places where liquors are sold without being in charge of a parent or guardian, playing any game of chance or skill in any place wherein or adjacent to which liquors are sold or given away, being employed

in any illegal, indecent, or immoral exhibition or practice, collecting cigar stumps, bones, or refuse for market, and peddling. Moreover, any girl under the age of 12 may be committed in case she is convicted of a felony.

AGE OF ADMISSION.

12 years	19
13 years	27
14 years	53
15 years	62
Over 16 years	4
Total	165

OFFENSES.

Assault, third degree	1
Assault, first degree	1
Associating with dissolute and vicious persons	38
Associating with dissolute and vicious persons and prostitution	1
Associating with dissolute and vicious persons and willful disobedience	5
Associating with dissolute and vicious persons and ungovernable child	3
Associating with dissolute and vicious persons and disorderly child	2
Associating with dissolute and vicious persons and no proper guardianship	2
Disorderly child	14
Ungovernable child	18
Disorderly and ungovernable child	5
Ungovernable child and prostitution	1
Ungovernable child and no proper guardianship	1
Ungovernable child and desertion of home	1
No proper guardianship	24
No proper guardianship and prostitution	1
No proper guardianship and truancy	1
Willful disobedience	6
Willful disobedience and prostitution	1
Prostitution	2
Frequenting houses of prostitution	1
Prostitution and vagrancy	4
Vagrancy	9
Truancy	3
Habitual and incorrigible truancy	1
Attempted suicide	1
Petit larceny	12
Grand larceny	2
Shoplifting	1
Total	162

CONVICTIONS.

Convicted first time	120
Convicted second time	10
Convicted third time	2
Number of convictions not known	30
Total	162

EDUCATION.

Illiterate	31
Can read and write fairly well	109
Common school education	22
Total	162

OCCUPATION.

Actress	1
Domestics	27
Errand girl	1
Farm hands	2
Laundry employee	1
Mill or factory operators	8
No occupation	71
Nurse girls	2
Sales girls	8
School girls	40
Stenographer	1
Total	162

RELIGION.

Protestant	95
Catholic	25
Christian Scientist	1
Jewish	24
None	17
Total	162

CONDITION.

Single	158
Married	4
Total	162

OHIO.

Boys' Industrial School, Lancaster, Ohio.

Per capita record.

1865	$155.95	1886	$122.81
1866	178.07	1887	135.69
1867	158.85	1888	140.01
1868	162.30	1889	125.39
1869	131.15	1890	143.95
1870	120.51	1891	128.90
1871	121.05	1892	144.64
1872	160.89	1893	115.94
1873	126.16	1894	134.29
1874	115.45	1895	119.90
1875	125.02	1896	114.10
1876	114.88	1897	144.10
1877	116.06	1898	133.76
1878	114.29	1899	145.67
1879	133.17	1900	136.71
1880	174.84	1901	146.59
1881	161.07	1902	156.40
1882	199.02	1903	150.27
1883	169.29	1904	157.83
1884	151.15	1905	156.87
1885	114.22		

Ages of boys received during the year 1905.

9 years	9	16 years	51
10 years	22	17 years	18
11 years	46	18 years	10
12 years	49	19 years	6
13 years	64	20 years	5
14 years	79	Unknown	15
15 years	85		

Moral and social conditions, 1906.

Parents both dead	43	Mother intemperate	8
Father dead	85	Father insane	2
Mother dead	87	Parents separated	106
Father living—unknown	21	Used profane language	245
Parents living—unknown	5	Used tobacco	209
Has stepfather	57	Used cigarettes	30
Has stepmother	42	Were truants	238
Father intemperate	135		

Moral and social conditions, 1905.

Parents both dead	25	Father intemperate	110
Father dead	88	Father intemperate—unknown	19
Mother dead	67	Mother intemperate	4
Parents living—unknown	9	Parents separated	84
Has stepfather	42	Used profane language	177
Has stepmother	33	Used tobacco	140
Mother insane	1	Used cigarettes	40
Father insane	1	Were truants	215

PENNSYLVANIA.

Pennsylvania Reform School (Morganza, Pa.)

Statement showing the parental relations of inmates committed up to 1904.

Unknown	89	Parents separated	894
Parents dead	1,134	Parents living together	3,637
Father dead	2,280		
Mother dead	1,614	Total	9,648

Table exhibiting offenses for which inmates were committed since 1861.

Adultery	1	Intent to commit felony	12
Arson	10	Involuntary manslaughter	4
Assault and battery	44	Larceny	1,009
Assault with intent to rob	3	Larceny and receiving stolen goods	26
Attempt to commit rape	13	Malicious injury to railroads	6
Attempt to commit felony	39	Malicious mischief	34
Aiding prisoners to escape	1	Manslaughter	3
Burglary and attempt robbery	73	Maiming with intent to kill	1
Breaking and entering	9	Misdemeanor	3
Carrying concealed weapons	5	Open lewdness	4
Concealing bastard child	1	Prostitution	40
Delinquent	48	Pointing and discharging firearms	1
Disorderly conduct	7	Perjury	1
Embezzlement	6	Rape	11
Enticing minor child	1	Robbery	2
Felony	6	Riot	1
False pretense	4	Receiving stolen goods	3
Forgery	5	Robbing United States mail	3
Fornication	8	Runaway	1
Felonious assault	1	Sodomy	3
Gambling	1	Surety of the peace	4
Grand larceny	1	Statutory burglary	5
Habitual drunkenness	4	Vagrancy	381
Highway robbery	3	Vicious conduct	841
Horse stealing	20		
Incorrigibility	1,526		
Incorrigible and vicious conduct	4,327	Total	8,475

The inmates of this reform school consist of (1) those committed for incorrigible or vicious conduct; (2) for vagrancy; (3) children of vicious parents, incapable or unwilling to care for them; (4) boys and girls guilty of vice or crime due to circumstances, who are not yet hardened in sin and appear capable of reformation. More than one half were committed for incorrigible and vicious conduct. Only 37 per cent had both parents living.

House of Refuge, Glen Mills, Pa. (1906.)

DISCHARGED DURING THE YEAR.

By return to friends	335	Discharged as unsuitable	1
By indenture	39	Died	1
By return to court	1		
By order of court	1	Total	384
Discharged to find work	6		

Of those admitted, 116 were committed on complaint of parents, relatives, or guardians.

Of those admitted, 198 had both parents living at the date of their commitment, 68 had lost their mothers, 80 had lost their fathers, 20 had lost both parents; total, 366.

The average age when admitted to the boys' department was 13 years 10 months.

Report of schools for 1906.

	Boys.
Number in school January 1, 1906	678
Number admitted during the year	366
	1,044
Number discharged during the year	384
Number in school December 31, 1906	660
Average daily attendance for the year	625

Average time in the house of those discharged, two years five and five-twelfths months.

Attainments in reading.[a]	Boys.	
	Education when admitted	Education when discharged.
Ignorant of the alphabet	37	1
Could read easy lessons only	144	6
Could read poorly	83	52
Could read fairly	112	167
Could read well	8	158
	384	384

Attainments in writing.	Boys.	
	Education when admitted.	Education when discharged.
Could not write name	31	1
Could write name only	50	0
Could write legibly	193	17
Could write fairly	104	121
Could write well	6	245
	384	384

Report of schools—Continued.

Attainments in arithmetic.[a]	Boys.	
	Education when admitted	Education when discharged.
Ignorant of figures	59	1
Could cipher in addition only	119	1
Could cipher in substraction	47	32
Could cipher in multiplication	71	16
Could cipher in division	79	141
Could cipher in fractions	6	21
Could cipher in general arithmetic	3	172
	384	384

[a] It should be remembered that a number of children remain in the house but a few days, being rejected as unsuitable subjects, which accounts for the little progress made by a few as shown by the above table.

THE VISITING AGENTS.

BOY'S DEPARTMENT.

	Indenture.	Parole.	Total.
On January 1, 1906, there were under the care of the Department	70	658	728
Of those paroled during the year	39	345	384
Making altogether	109	1,003	1,112
Deducting the number matured	25	247	.....
Absconded	12	.....	.....
Returned from indenture	7	.....	.....
Returned by friends	.....	36	.....
Recommitted by courts	.....	10	.....
Recommitted by magistrate	.....	1	.....
Sent to prison	.....	30	.....
Sent to Huntingdon Reformatory	.....	23	.....
Sent to other punitive institutions	.....	2	.....
Died	.....	7	.....
Total	44	356	.....
Now under Visiting Agent's care	65	647	712

Of the whole number (1,112) under the care of the Department during the year, 220 have been complained of. The boys committed to the other punitive institutions are included in this enumeration as well as the boys recommitted and returned. After a careful investigation 160 of the complaints were fully sustained, 57 were justifiable in part, and 3 were without foundation (192 of those complained of were white and 28 colored). This shows that about 80 per cent have done well, and about 20 per cent badly.

GIRL'S DEPARTMENT.

Number of girls received into the house of refuge since its opening in 1828	6,116
Number discharged by indenture or given up to friends	5,991
Remaining in the house, January 1, 1906	125
Admitted during the year 1906	102
Received from parole and indenture	16
Indentured or given up to friends in 1906	47

RHODE ISLAND.

SOCKANOSSET SCHOOL FOR BOYS.

TABLE 1.—*Number received and discharged, also the number remaining in the institution at the close of each year, since its opening (November 1, 1850).*

Year.	Received.	Discharged.	Remaining.
The first year	52	7	45
The second year	65	31	79
The third year	91	69	101
The fourth year	85	80	106
The fifth year	99	63	142
The sixth year	87	86	143
The seventh year	129	91	181
The eighth year	111	111	181
The ninth year	112	106	187
The tenth year	97	115	169
The eleventh year	128	110	187
The twelfth year	133	116	204
The thirteenth year	183	179	208
The fourteenth year	198	188	218
The fifteenth year	153	155	216
The sixteenth year	155	164	207
The seventeenth year	157	165	199
The eighteenth year	159	134	224
The nineteenth year	184	185	223
The twentieth year	143	134	232
The twenty-first year	117	138	211
The twenty-second year	113	131	193
The twenty-third year	133	120	206
The twenth-fourth year	163	149	220
The twenth-fifth year	128	133	215
The twenty-sixth year	120	134	205
The twenty-seventh year	153	141	213
The twenty-eighth year	143	118	238
The twenty-ninth year	119	126	231
The thirtieth year	121	113	239
The thirty-first year	158	208	189
The thirty-second year	148	199	[a] 138
The thirty-third year	194	159	173
The thirty-fourth year	168	177	164
The thirty-fifth year	130	128	169
The thirty-sixth year	124	101	189
The thirty-seventh year	158	133	214
The thirty-eighth year	117	131	200
The thirty-ninth year	150	120	230
The fortieth year	131	176	195
The forty-first year	151	161	185
The forty-second year	224	174	225
The forty-third year	196	171	250
The forty-fourth year	190	198	242
The forty-fifth year	196	173	265
The forty-sixth year	299	280	284
The forty-seventh year	239	212	311
The forty-eighth year	296	248	359
The forty-ninth year	274	304	329
The fiftieth year	285	279	335
The fifty-first year	277	248	364
The fifty-second year	318	322	360
The fifty-third year	326	349	337
The fifty-fourth year	323	331	329
The fifty-fifth year	361	345	345

[a] Twenty girls transferred to Oaklawn School, July 13, 1882.

DARK CELL PUNISHMENT.

For serious infraction of rules punishment in a dark cell is resorted to, but only after moral suasion has been patiently tried. Twenty-two occasions for such punishment occurred during the year among the men, and five among the women, the duration of the confinement in the cell having averaged about nineteen and a half hours for the former and twenty-five hours for the latter. The offenses among

the men were as follows: Impudence and laziness, 6; using profane and violent language, 6; throwing down tools and refusing to work, 3; assault on an officer, 1; abusing oxen, 1; carelessness about work, 1; attempting to escape, 3; throwing tools and behaving in a violent manner, 1; writing clandestine letters, 1. The offenses among the women were: Assault, 1; writing vulgar notes, 1; quarreling, 1; writing notes to men, 1; refusing to wear stockings that had been darned, 1.

SOCKANOSSET SCHOOL FOR BOYS.

TABLE 2.—*Cause of commitment up to present time.*

Cause.	Total.	Cause.	Total.
Arson	5	Lewdness	1
Assault	112	Malicious mischief	99
Assault and battery	23	Obtaining goods under false pretenses	5
Assault with intent to kill	3	Obtaining money under false pretenses	5
Assault with intent to commit rape	6	Passing counterfeit money	1
Assault with intent to rob	2	Receiving stolen money or goods	16
Burglary and theft	21	Returned for cause	887
Burning building	13	Returned voluntarily	147
Contempt of court	1	Reveling	6
Cruelty to animals	3	Shop-breaking	189
Carrying concealed weapons	2	Stubbornness and truancy	394
Carnal knowledge	9	Taking and using boat	3
Defacing a building	35	Theft from the person	13
Defacing property	4	Theft	2,510
Destroying property	3	Threatening to assault	1
Disorderly conduct on the street	96	Threatening to kill	1
Disturbing school	8	Throwing stones at a train	3
Driving off a horse and carriage	69	Transferred from jail by board	143
Drunkenness	16	To await trial	1,621
Embezzlement	11	Truancy (chapter 363, Public Laws)	25
Exposure of person	1	Truancy (chapter 649, Public Laws)	706
Forgery	6	Using profane language	2
Fast driving	1	Vagrancy	1,160
Held for probation officer	7	Surrendered by surety	2
Housebreaking	78	Sturdy beggar	1
Housebreaking and theft	57	False pretenses in writing	1
Housebreaking with intent to steal	15		
Incorrigibility	4	Total	8,553

The main cause of commitment, as indicated in Table 2, was theft. Vagrancy and truancy are also frequent causes of commitment.

TABLE 3.—*Length of time spent in the institution by those discharged.*

Time.	Total.	Time.	Total.
Less than one month	1,589	Forty-months and less than forty-five	97
One month and less than five	942	Forty-five months and less than fifty	71
Five months and less than ten	688	Fifty months and less than fifty-five	41
Ten months and less than fifteen	816	Fifty-five months and less than sixty	38
Fifteen months and less than twenty	1,208	Sixty months and more	78
Twenty months and less than twenty-five	1,598	Error in report of 1881	57
Twenty-five months and less than thirty	476		
Thirty months and less than thirty-five	289	Total	8,208
Thirty-five months and less than forty	220		

TABLE 4.—*Disposal and employment of those discharged.*

Disposal.	Total.	Disposal.	Total.
Delivered to friends	3,867	Placed at farming	524
Delivered to court	1,477	Placed at various trades	115
Delivered to overseer of poor	10	Placed at Asylum for Deaf and Dumb	1
Discharged on expiration of sentence	809	Sent to State workhouse and house of correction	72
Discharged to go to sea	35	Sent to prison	25
Discharged as insane	5	Discharged on payment of fines and costs	2
Died	40	Released on bail	287
Enlisted in the Army	52	Discharged by order of court	27
Enlisted in the Navy	13	Discharged by order of mayor	1
Escaped, not returned	179	Discharged by order of attorney-general	14
Escaped, absent more than one day and returned or retaken	232	Discharged by order of board	3
Escaped, retaken and sent to jail under new sentence	3	Discharged to probation officer	6
Escaped, previously retaken and sent to jail on alternative sentence	9	Placed with Children's Friend Society	1
Escaped from Rhode Island Hospital, having been injured in attempting to escape from the school	1	Transferred to jail on alternative sentence	6
Indentured	193	Transferred to State almshouse	4
		Returned to jail	138
		Error in report of 1881	57
		Total	8,208

PROBATION OFFICER.

The work of a probation officer may be best understood by the following report of one.

In the court 200 boys, whose ages were from 7 to 16 years, were officially intrusted to the care of the probation officer the past year. One hundred and fifty men, over 16 years of age, classed under the law as adult offenders, 50 per cent of them under 25 years of age, were likewise placed on probation. Forty other boys and young men, who were either apprehended by the police or ordered to appear in court, were placed in the care of the probation officer by the captains of the different districts without arraignment. All the runaway boys arrested in various parts of the city and brought to the central police station pending the notification of their parents or friends were interviewed and their cases properly disposed of. More than two hundred suspicious characters, mostly nonresidents, arrested on suspicion and held for investigation, were sent out of the State.

The duties of probation officers are many and varied. They attend all the daily sessions of the court, talk with the prisoners, gain their confidence, especially those who are likely to be candidates for probation, and are prepared to report to the court on each individual case. When children are involved, it often happens that having convinced them that there is no sword hanging over their heads and winning them by kindness and encouraging words, they, for the first time, tell the truth in regard to the offense for which they were arrested, thereby obviating the necessity for trial and obtaining for themselves greater clemency from the court. Complaints from irate citizens, who demand warrants for mischievous boys, guilty of trivial, but often annoying, misdemeanors, are frequently considered. Unless the cases are flagrant, no warrant is issued until after a thorough investigation has been made, and a few visits to the home of the offender generally has the desired effect. Petitions from parents and guardians of incorrigible and wayward children likewise have to be heard and acted upon without resort to the police or the court.

Probationers, both adult and juveniles, come to report, to seek advice, to consult in regard to some emergency, or to beg assistance

in securing employment. Persons apply for help, sometimes for boys to run errands or to work in shops or stores, or for men to work on farms or elsewhere, or, perhaps, they come to inquire about the record of a probationer who has applied for a position; in a word, the probation officer must be ready with wise head, sympathetic heart, quick judgment, and unlimited patience, to act as adviser, detective, friend, and manager of a bureau of employment and information, every day until noon and on trial days until the end of the session, even if it lasts well into the afternoon. The rest of the day is devoted to outside investigation, such as visiting the homes, looking up employment, consulting with parents, teachers, pastors, relatives, and neighbors, in gathering and putting together the materials for the foundation on which the child and parents must build after the helpful and restraining effects of probationary measures are removed. The home is the pivot upon which the probation officers' work revolves. It is here that they meet the most discouraging problems and it is here they ascertain the causes which must be removed and replaced by better conditions and new ideals, if they would look for permanent results from their efforts in behalf of their charges.

From the home the probation officers' field extends in all directions. They seek assistance and cooperate with every existing agency, such as boys' clubs, playgrounds for children, public libraries, gymnasiums, etc. They work in harmony with the overseers of the poor and truant officers, and all organizations with which they come in contact. Finally they seek to understand the point of view, to share the experiences and aid in solving the vexatious problems which are daily presented. The results can not be calculated in figures nor tabulated in statistics; they shine forth gloriously in more regular attendance in school and church, in increased cleanliness, in smaller expenditures in the saloons and larger for comforts at home, in reunited families, in aroused ambitions, in awakened consciences, in clearer conceptions of duty and firmer purpose to perform it, in restraint of passions, and in purer and nobler lives.

PROBATION OFFICER.

VERMONT.

VERMONT INDUSTRIAL SCHOOL, RUTLAND, VT.

In Table 1 is given the cause of commitment to the school up to 1906. Petit larceny, truancy, discipline and reform, vagrancy, burglary, grand larceny, and assault are the chief causes of commitment given in the order of their frequency. Table 2 shows that most commitments are made at the age of 15, the great majority entering between the ages of 10 and 15.

The moral and domestic condition of inmates before committed, as indicated in Tables 3 and 6 is not encouraging, and it is not strange that children with such incomplete homes should go wrong.

In the girls' department the main causes of commitment have been larceny, truancy, unmanageableness, and gross lewdness (Table 4). Table 5 indicates 14 as the age at which most girls are committed.

BOYS' DEPARTMENT.

TABLE 1.—*Cause of commitment.*

Arson	19	Horse stealing	13
Assault	60	Intoxication	13
Assault with intent to kill	2	Loitering around railroad station	5
Attempting to break jail	1	Malicious conduct	20
Attempting to commit rape	3	Maliciously disturbing school	13
Attempting to aid escape of prisoner	1	Manslaughter	1
Breach of peace	58	Obtaining goods under false pretenses	5
Breaking and entering	13	Obtaining money under false pretenses	1
Brutality	3	Petit larceny	737
Burglary	78	Placing obstruction on railroad	9
Cruelty to animals	1	Receiving stolen property	2
Destruction of property	32	Threatening arson	1
Discipline and reform	111	Throwing stone through car window	2
Displacing railroad switches	2	Truancy	192
Embezzlement	1	Unmanageableness	34
Forgery	3	Vagrancy	89
Giving poison to family and horses	2	Violation of liquor law	3
Grand larceny	65		
Gross lewdness	6	Total	1,602
Having firearms in possession	1		

TABLE 2.—*Age when committed.*

20 years	1	11 years	167
18 years	13	10 years	125
17 years	14	9 years	56
16 years	25	8 years	32
15 years	345	7 years	19
14 years	310	6 years	9
13 years	267		
12 years	219	Total	1,602

TABLE 3.—*Moral and domestic condition before commitment.*

Had lost father	168	Had used profanity	724
Had lost mother	201	Had not regularly attended school	482
Had lost both parents	60	Had used intoxicating drinks	74
Had intemperate fathers	300	Mentally deficient	5
Had used tobacco	490	Whose parents had separated	22

GIRLS' DEPARTMENT.

TABLE 4.—*Cause of commitment.*

Adultery	1	Obtaining property under false pretenses	1
Arson	4	Placing obstruction on railroad	1
Assault	6	Prostitution	1
Breach of peace	10	Receiving stolen property	1
Destruction of property	6	Sending obscene literature through the mail	1
Discipline and reform	4	Truancy	52
Gross lewdness	39	Unmanageable	49
Intoxication	4	Vagrancy	4
Larceny	54	Violation of curfew	1
Loitering around railroad station and grounds	1	Total	240

TABLE 5.—*Showing age when committed.*

18 years	0	10 years	15
17 years	2	9 years	10
16 years	6	8 years	5
15 years	30	7 years	2
14 years	74	6 years	0
13 years	37		
12 years	35		240
11 years	24		

TABLE 6.—*Moral and domestic condition before commitment.*

Had lost father	57	Had not regularly attended school	124
Had lost mother	48	Had used cigarettes	3
Had lost both parents	19	Mentally deficient	1
Had intemperate fathers	92	Whose parents had separated	2
Had used profanity	71		

WEST VIRGINIA.

WEST VIRGINIA REFORM SCHOOL, PRUNTYTOWN, 1905, 1906.

Offense for which committed.

Felony	78	Misdemeanor	1
Burglary	0	Incorrigibility	169
Larceny	3		
Petit larceny	0	Total	253
Grand larceny	2		

Age when committed.

8	8	15	63
9	5	16	25
10	12	17	26
11	15	18	3
12	33		
13	33	Total	253
14	30		

WISCONSIN INDUSTRIAL SCHOOL FOR BOYS, WAUKESHA, WIS.

Number of inmates received each year from opening of the school.

For the year ending—	Number committed.		Total from beginning.	Number returned.		Total received during year.	Number present at close of the year.			Whole number for year.
	Boys.	Girls.		Boys.	Girls.		Boys.	Girls.	Total.	
Dec. 31, 1860	33	7	40	.....	.....	40	33	7	40	4[illegible]
Sept. 30, 1861	34	7	81	.....	.....	41	35	5	40	81
Sept. 30, 1862	37	3	121	.....	.....	40	51	4	55	80
Sept. 30, 1863	32	10	163	.....	1	42	59	13	72	98
Sept. 30, 1864	74	9	246	.....	.....	83	117	20	137	155
Sept. 30, 1865	85	22	353	1	.....	108	134	21	155	245
Sept. 30, 1866	45	2	400	4	3	54	118	16	134	209
Sept. 30, 1867	68	.....	468	4	11	83	143	12	155	217
Sept. 30, 1868	50	3	521	14	5	72	149	14	163	227
Sept. 30, 1869	59	4	584	5	2	70	163	13	176	233
Sept. 30, 1870	114	.....	698	3	.....	117	204	2	206	293
Sept. 30, 1871	75	.....	773	6	1	82	237	2	239	288
Sept. 30, 1872	107	.....	880	1	.....	108	278	.....	.....	347
Sept. 30, 1873	80	.....	960	4	.....	84	281	.....	.....	362
Sept. 30, 1874	115	.....	1,075	6	.....	121	301	.....	.....	402
Sept. 30, 1875	103	.....	1,178	8	.....	111	300	.....	.....	412
Sept. 30, 1876	107	.....	1,285	8	.....	115	318	.....	.....	415
Sept. 30, 1877	140	.....	1,425	13	.....	153	364	.....	.....	471
Sept. 30, 1878	151	.....	1,576	12	.....	163	419	.....	.....	527
Sept. 30, 1879	117	.....	1,693	8	.....	125	431	.....	.....	543
Sept. 30, 1880	108	.....	1,801	10	.....	118	430	.....	.....	549
Sept. 30, 1881	90	.....	1,891	5	.....	95	372	.....	.....	525
Sept. 30, 1882	88	.....	1,979	7	.....	95	299	.....	.....	467
Sept. 30, 1883	95	.....	2,074	8	.....	103	278	.....	.....	402
Sept. 30, 1884	113	.....	2,187	7	.....	120	297	.....	.....	398
Sept. 30, 1885	89	.....	2,276	8	.....	97	293	.....	.....	394
Sept. 30, 1886	121	.....	2,397	6	.....	127	325	.....	.....	420
Sept. 30, 1887	127	.....	2,524	6	.....	133	340	.....	.....	461
Sept. 30, 1888	135	.....	2,659	7	.....	142	376	.....	.....	483
Sept. 30, 1889	157	.....	2,817	7	.....	164	406	.....	.....	540
Sept. 30, 1890	162	.....	2,979	13	.....	175	423	.....	.....	581
Sept. 30, 1891	181	.....	3,160	17	.....	198	342	.....	.....	621
Sept. 30, 1892	173	.....	3,333	15	.....	188	303	.....	.....	530
Sept. 30, 1893	184	.....	3,517	13	.....	197	313	.....	.....	500
Sept. 30, 1894	198	.....	3,715	26	.....	224	351	.....	.....	537
Sept. 30, 1895	209	.....	3,924	30	.....	239	345	.....	.....	590
Sept. 30, 1896	178	.....	4,102	53	.....	231	328	.....	.....	576
Sept. 30, 1897	169	.....	4,271	43	.....	212	344	.....	.....	540
Sept. 30, 1898	137	.....	4,408	34	.....	171	305	.....	.....	515
Sept. 30, 1899	134	.....	4,542	26	.....	160	304	.....	.....	474
Sept. 30, 1900	160	.....	4,702	30	.....	190	328	.....	.....	498
Sept. 30, 1901	150	.....	4,852	28	.....	178	330	.....	.....	506
June 30, 1902	122	.....	4,974	21	.....	143	325	.....	.....	473
June 30, 1903	155	.....	5,129	22	.....	177	286	.....	.....	502
June 30, 1904	178	.....	5,307	43	.....	221	327	.....	.....	507

This industrial school is a place of confinement and instruction of all boys between 10 and 18 years of age who are committed to it as vagrants or on conviction of any criminal offense or for incorrigibility or vicious conduct.

WISCONSIN.

WISCONSIN INDUSTRIAL SCHOOL FOR GIRLS, 1905–1906, MILWAUKEE.

PROPER SUBJECTS.

1. Girls under 18 years of age who are beggars, vagrants, ragpickers, or wanderers, or are destitute because of orphanage or abandonment, or having a parent undergoing imprisonment, or otherwise without means of support.

2. Girls under the above age who are found in circumstances of manifest danger of falling into habits of vice, etc.

3. The form of commitment should be considered a civil rather than a criminal process.

4. In addition to the girls sent by legal process, the school receives, boards, and teaches girls for parents or guardians, on their paying the same sum as is paid by the counties for those committed by the courts.

PECULIAR FEATURES.

1. The institution was founded by private charity and is under the control of a self-perpetuating board of managers, originally chosen by the contributors and corporate members and thereafter annually elected.

2. It is incorporated and employed by the State for the custody, guardianship, discipline, and instruction of the above-named classes of girls, and, in default of responsible and efficient guardianship, treats them as its wards.

3. The restraints of the school are parental, not punitive, as no child can be received as a criminal offender. Its purposes are the prevention of crime and pauperism, by the preservation of unfortunate girls, and the restoration of those who have fallen into bad habits or inherited vicious tendencies.

4. The system of discipline and education is specially adapted to the condition and needs of the pupils. It aims to provide for each the instruction of a public school, systematic manual training, and the care and nurture of a well-regulated Christian family. Its culture is physical, sanitary, educational, and truly religious, but not sectarian.

Almost half of the girls are of German parentage (Table 1). This is local, being due to the large number of Germans in the community.

Nearly two-thirds of the paroled girls are reported as "doing well," and, with those doing "fairly well" added, five-sixths of these girls are on the way to become better women. While parental rights are recognized, in most cases girls do best when placed among strangers, where they are removed from the dangers and shame of the old environment.

TABLE I.—*Parentage of committed girls.*

American	16	German and French	3
Austrian	1	Dutch and English	1
English	3	Irish	2
English and German	2	Irish and French	2
English and Irish	2	Norwegian	4
English and Scotch	1	Norwegian and Danish	2
English and French	1	Polish	2
French	3	Scotch and French	2
French and American	1	Scotch	2
German	42	Swedish	1
German and American	1	Norwegian and Irish	1
German and Dutch	1		
German and Irish	1	Total	98
German and Polish	1		

TABLE 2.—*Ages of girls paroled and dismissed.*

9 years	2	17 years	24
11 years	1	18 years	17
12 years	3	19 years	18
14 years	5	20 years	53
15 years	4		
16 years	6	Total	133

TABLE 3.—*Ages of girls when committed.*

8 years	1	15 years	20
9 years	2	16 years	25
10 years	3	17 years	23
12 years	3		
13 years	7	Total	98
14 years	14		

DISPOSAL OF THOSE DISMISSED.

1. On leaving the school girls are given by adoption or indenture to the care of well-investigated families or returned to former homes or relatives.

2. Except in cases of the adoption of young girls, the highest grade in the conduct record and at least the second class in scholarship must be attained before dismissal.

3. Supervision and guardianship over those placed out are maintained by visits and correspondence, and those not doing well are returned for further training or transferred to other homes at any time during minority.

4. The object of the institution being the proper training and schooling of these girls, it is regarded as unwise and inexpedient to receive them for temporary shelter only, and the average detention thus far has been about three years.

XV.—STATISTICS OF YOUNG CRIMINALS IN THE UNITED STATES.[a]

By young criminals are meant persons between 7 and 21 years of age committed to reformatories by some lawful authority. During the last ten years there has been a tendency toward the noninstitutional treatment of first offenders and confinement in special institutions for frequent offenders.

Table I shows the number of juvenile criminals in institutions to have increased from 14,846 in 1890 to 23,034 in 1904, that is an increase of over 50 per cent. While this does not necessarily indicate an increase of youthful crime in general, it nevertheless suggests the probability of increase. Such increase could be best determined from the records of the criminal and juvenile courts.

[a] Most of the conclusions and the tables are taken from the Census Report.

TABLE I.—*Number and ratio of juvenile delinquents enumerated in institutions on date of census, for States and Territories: 1904 and 1890.*

[Census report.]

State or Territory.	Juvenile delinquents.					
	June 30, 1904.		June 1, 1890.		Increase (+) or decrease (−) from 1890 to 1904.	
	Number.	Number per 100,000 of population. (a)	Number.	Number per 100,000 of population.	Number.	Number per 100,000 of population.
Continental United States	23,034	28.3	14,846	23.7	+8,188	+ 4.6
North Atlantic division	10,877	48.3	7,388	42.5	+3,489	+ 5.8
Maine	226	31.9	169	25.6	+ 57	+ 6.3
New Hampshire	181	42.5	102	27.1	+ 79	+15.4
Vermont	137	39.3	86	25.9	+ 51	+13.4
Massachusetts	1,107	36.5	698	31.2	+ 409	+ 5.3
Rhode Island	356	77.0	270	78.1	+ 86	− 1.1
Connecticut	702	72.0	626	83.9	+ 76	−11.9
New York	5,826	74.8	3,675	61.3	+2,151	+13.5
New Jersey	650	31.5	608	42.1	+ 42	−10.6
Pennsylvania	1,692	25.1	1,154	21.9	+ 538	+ 3.2
South Atlantic division	2,296	20.7	1,293	14.6	+1,003	+ 6.1
Delaware	98	51.2	45	26.7	+ 53	+24.5
Maryland	1,070	85.8	1,061	101.8	+ 9	−16.0
District of Columbia	405	135.7	187	81.2	+ 218	+54.5
Virginia	279	14.4	(b)	(b)	+ 279	+14.4
West Virginia	314	30.2	(b)	(b)	+ 314	+30.2
Georgia	99	4.2	(b)	(b)	+ 99	+ 4.2
Florida	31	5.3	(b)	(b)	+ 31	+ 5.3
North Central division	8,040	28.8	5,451	24.4	+2,589	+ 4.4
Ohio	1,741	40.0	1,529	41.6	+ 212	− 1.6
Indiana	872	32.9	636	29.0	+ 236	+ 3.9
Illinois	1,386	26.5	383	10.0	+1,003	+16.5
Michigan	1,114	44.0	696	33.2	+ 418	+10.8
Wisconsin	543	24.4	591	35.0	− 48	−10.6
Minnesota	360	18.6	284	21.8	+ 76	− 3.2
Iowa	714	30.2	527	27.6	+ 187	+ 2.6
Missouri	670	20.4	360	13.4	+ 310	+ 7.0
North Dakota	39	10.5	(b)	(b)	+ 39	+10.5
South Dakota	65	15.4	(b)	(b)	+ 65	+15.4
Nebraska	164	15.4	237	22.4	− 73	− 7.0
Kansas	372	25.0	208	14.6	+ 164	+10.4
South Central division	620	4.1	359	3.3	+ 261	+ 0.8
Kentucky	301	13.3	273	14.7	+ 28	− 1.4
Tennessee	246	11.6	(b)	(b)	+ 246	+11.6
Alabama	37	1.9	(b)	(b)	+ 37	+ 1.9
Louisiana	36	2.4	86	7.7	− 50	− 5.3
Western division	1,201	26.7	355	11.7	+ 846	+15.0
Montana	78	27.4	(b)	(b)	+ 78	+27.4
Colorado	288	48.7	149	36.1	+ 139	+12.6
Arizona	31	22.6	(b)	(b)	+ 31	+22.6
Utah	79	26.0	(b)	(b)	+ 79	+26.0
Washington	158	27.1	(b)	(b)	+ 158	+27.1
Oregon	93	20.5	(b)	(b)	+ 93	+20.5
California	474	29.7	206	17.1	+ 268	+12.6

a Estimated, July 1, 1904.

b No returns.

By examination of Table I you will find for the different States and Territories the number and ratio of delinquents in institutions in 1890 and 1904, with increase or decrease indicated.

Table II gives for the different States and Territories the number of youthful criminals for every 100,000 of population, according to sex, color, and nativity, in the years 1890 and 1904.

It will be seen that crime is relatively greater in colored children than in white.

According to the census report there is no "markedly greater criminal tendency among the foreign-born youth than among the native."

TABLE II.—*Ratio of juvenile delinquents enumerated on date of census, classified by sex, color, and nativity, for States and Territories: 1904 and 1890.*

State or Territory.	Number of juvenile delinquents per 100,000 of population.											
	June 30, 1904 (based on population of 1900).						June 1, 1890.					
	Male.	Female.	White.			Colored.	Male.	Female.	White.			Colored.
			Total.	Native.[a]	Foreign born.[a]				Total.	Native.[a]	Foreign born.[a]	
Continental United States	46.8	13.1	29.7	31.8	18.4	34.4	36.0	10.8	23.5	25.0	15.9	25.4
North Atlantic division	83.1	20.3	48.6	54.2	29.8	208.9	65.7	19.3	39.6	44.9	21.4	216.4
Maine	42.5	22.4	32.2	34.7	16.1	133.9	34.6	16.4	25.2	25.7	21.6	164.6
New Hampshire	70.1	17.9	44.1	51.1	18.2	.....	48.2	6.3	26.1	27.3	20.8	579.7
Vermont	66.2	12.5	39.7	43.3	15.7	114.9	43.1	8.0	24.1	26.4	9.1	597.6
Massachusetts	65.2	15.0	37.9	48.1	14.4	163.0	51.5	12.0	30.3	34.8	19.6	114.6
Rhode Island	147.3	21.1	76.6	95.0	37.4	368.2	139.9	19.7	72.2	94.0	24.5	340.0
Connecticut	94.2	60.3	67.8	74.3	49.7	606.4	110.9	57.3	75.5	92.0	26.2	561.6
New York	130.5	30.3	77.8	89.4	45.4	232.1	93.8	29.2	59.4	71.1	26.8	211.1
New Jersey	56.1	13.0	28.4	32.4	15.6	189.2	73.1	11.2	38.6	44.5	19.5	142.7
Pennsylvania	45.6	7.5	23.2	24.6	16.1	165.2	33.7	9.8	17.7	18.7	12.9	220.5
South Atlantic division	38.5	5.5	20.9	21.3	9.6	23.9	25.2	4.0	13.9	13.4	28.7	15.7
Delaware	81.8	23.2	37.0	40.6	.....	133.3	52.6	.....	15.0	15.8	7.6	84.4
Maryland	159.2	22.0	79.8	86.5	18.3	131.6	171.2	33.8	83.6	86.9	57.6	171.4
District of Columbia	240.9	59.3	55.9	62.2	.....	341.8	170.6	.....	44.0	47.7	16.2	157.2
Virginia	30.1	.....	12.8	13.0	.....	19.1	.....	.....	.....	.....	.....	.....
West Virginia	53.7	10.0	30.0	30.5	13.4	89.5	.....	.....	.....	.....	.....	.....
Georgia	9.0	.....	3.8	3.8	.....	5.2	.....	.....	.....	.....	.....	.....
Florida	11.3	.....	1.3	1.4	.....	11.7	.....	.....	.....	.....	.....	.....
North Central division	43.4	16.8	26.9	30.3	9.1	200.7	35.9	12.0	21.8	23.8	13.1	147.9
Ohio	62.6	20.7	35.6	38.3	14.2	304.1	60.7	22.2	36.0	35.2	41.4	273.1
Indiana	47.6	21.1	28.5	29.8	7.8	295.0	42.1	15.4	24.6	25.7	9.6	236.5
Illinois	42.9	13.8	24.5	27.8	11.6	261.9	19.4	.....	8.7	10.0	4.4	93.3
Michigan	62.2	28.8	43.9	51.2	18.7	276.6	42.7	23.0	31.4	36.8	16.1	214.2
Wisconsin	30.6	21.6	25.7	30.7	10.5	134.8	50.9	18.0	34.5	42.7	16.2	171.7
Minnesota	30.7	9.0	19.9	27.7	0.8	104.5	37.1	4.3	21.1	25.7	13.1	176.5
Iowa	43.5	19.6	29.3	93.8	1.6	477.8	39.4	14.7	24.2	27.8	6.8	619.8
Missouri	34.1	8.3	17.5	18.6	3.7	95.8	20.1	6.3	10.8	11.3	5.1	58.4
North Dakota	19.7	2.8	12.5	16.6	5.3	.....	.....	.....	.....	.....	.....	.....
South Dakota	25.4	5.4	16.3	21.2	.....	14.4	.....	.....	.....	.....	.....	.....
Nebraska	29.0	.....	15.0	17.1	4.5	61.4	29.0	14.6	21.6	24.9	7.9	91.5
Kansas	27.6	22.8	18.9	20.5	2.4	193.8	23.0	5.2	12.7	13.8	4.1	65.3

South Central division	6.9	1.8	4.3	4.4	2.8	4.6	5.3	1.1	2.8	2.8	2.2	4.3
Kentucky	22.0	5.8	9.4	9.7	.....	44.2	22.5	6.7	11.9	12.0	10.1	31.0
Tennessee	17.9	6.3	12.3	12.1	34.1	11.7	.....	.....	.....	.....	.....	.....
Alabama	4.0	.....	3.7	3.7	.....	.....	.....	.....	.....	.....	.....	.....
Louisiana	5.2	.....	3.2	2.8	7.7	2.0	15.4	.....	3.4	3.5	2.1	12.0
Western division	44.9	9.4	28.4	33.5	7.5	45.9	14.6	7.5	12.1	14.5	4.2	5.7
Montana	44.0	12.8	29.6	39.7	3.2	64.5	.....	.....	.....	.....	.....	.....
Colorado	74.5	27.8	46.7	55.4	4.4	384.8	59.1	2.4	35.4	40.1	17.0	77.6
Arizona	43.2	.....	32.3	34.0	26.8	3.3	.....	.....	.....	.....	.....	.....
Utah	40.2	16.3	27.9	30.5	17.0	70.0	.....	.....	.....	.....	.....	.....
Washington	44.4	10.8	30.8	36.0	10.8	22.9	.....	.....	.....	.....	.....	.....
Oregon	39.9	.....	23.6	25.8	9.3	.....	.....	.....	.....	.....	.....	.....
California	52.4	6.6	31.0	38.2	6.3	47.4	16.6	17.7	18.3	23.1	4.8	3.1

[a] The white juvenile delinquents of "unknown nativity" have been proportionally distributed between the native and foreign.

In Table III are given the different kinds of offenses according to geographic divisions, in per cent distribution.

TABLE III.—*Per cent distribution, by offense, of juvenile delinquents enumerated, June 30, 1904, for main geographic divisions.*

Offense.	Per cent distribution of juvenile delinquents enumerated June 30, 1904.					
	Continental United States.	North Atlantic division.	South Atlantic division.	North Central division.	South Central division.	Western division.
Aggregate	100.00	100.0	100.0	100.0	100.0	100.0
Against society	50.4	51.9	54.1	47.9	29.0	57.8
Drunkenness	0.2	0.3	0.1	0.2	0.2	.....
Disorderly conduct	5.2	5.4	0.9	7.0	4.4	1.1
Vagrancy	5.4	7.1	4.7	3.6	6.3	2.1
Incorrigibility	26.8	23.0	42.6	24.7	15.8	51.3
Truancy	7.2	10.1	0.2	6.5	.....	2.0
All other	5.6	6.0	5.7	6.0	2.4	1.3
Against the person	2.6	1.4	1.6	4.5	2.4	2.0
Assault	1.5	1.1	0.7	2.4	1.3	0.7
Robbery	0.7	0.2	0.3	1.5	0.6	0.7
All other	0.3	0.1	0.5	0.6	0.5	0.6
Against property	32.1	29.9	23.7	37.4	37.3	30.0
Arson	0.3	0.3	0.2	0.3	0.2	0.5
Burglary	7.6	4.9	4.3	11.2	12.6	11.5
Larceny	23.0	23.7	17.9	24.4	21.9	16.2
Fraud	0.1	0.1	0.3	0.1	0.6	0.1
Embezzlement	0.1	(a)	0.1	0.1	.....	0.4
Malicious mischief and trespass	0.7	0.8	0.2	0.6	0.8	0.3
All other	0.4	0.1	0.7	0.7	1.1	0.9
Neglected children	10.3	14.5	12.8	4.0	30.3	0.3
Unclassified	3.5	1.4	2.3	6.1	0.3	9.2
Offense not stated	1.0	0.9	5.4	(a)	0.6	0.7

[a] Less than one tenth of 1 per cent.

In many cases "incorrigibility" indicates in a general way where the court does not desire the real crime to become a matter of record. Also many recorded as truants are guilty of more serious offenses. In some States young offenders are called "idle or disorderly" when their real crime is against chastity. Many also committed as truants or incorrigible are offenders against property. The proportion of those sentenced for crime against the person is large in the North Central States. It is probable that many designated as neglected children were guilty of serious offenses.

TABLE IV.—*Distribution, by country of birth, of foreign-born juvenile delinquents committed during 1904, for main geographic divisions.*

Country of birth.	Foreign-born juvenile delinquents committed during 1904.						
	Continental United States.		North Atlantic division.		North Central division.		All other.
	Number.	Per cent distribution.	Number.	Per cent distribution.	Number.	Per cent distribution.	Number.
Total	1,125	100.0	846	100.0	211	100.0	68
Austria	48	4.3	40	4.7	8	3.8	.....
Canada	112	10.0	77	9.1	25	11.8	10
England and Wales	78	6.9	53	6.3	17	8.1	8
Germany	115	10.2	50	5.9	61	28.9	4
Hungary	18	1.6	13	1.5	5	2.4	.....
Ireland	40	3.6	31	3.7	4	1.9	5
Italy	317	28.2	287	33.9	21	10.0	9
Poland	55	4.9	32	3.8	21	10.0	2
Russia	211	18.8	188	22.2	16	7.6	7
Scandinavia	24	2.1	5	0.6	18	8.5	2
Other countries	107	9.5	70	8.3	15	7.1	21

From Table IV, 28.2 per cent are seen to be Italian and 18.8 per cent Russian. Recent immigrants contribute a disproportionately large number to young criminals.

TABLE V.—*Per cent distribution, by years of residence in the United States, of foreign-born juvenile delinquents committed during 1904, for main geographic divisions.*

Years of residence in the United States.	Per cent distribution of foreign-born juvenile delinquents committed during 1904.					
	Continental United States.	North Atlantic division.	South Atlantic division.	North Central division.	South Central division.	Western division.
Total	100.0	100.0	(a)	100.0	(a)	(a)
Less than 1 year	1.6	1.5	.....	1.4	(a)	(a)
1 year	3.1	2.4	(a)	5.7	.....	(a)
2 years	5.8	6.6	(a)	3.3	.....	.....
3 years	5.1	5.7	(a)	3.8	.....	.....
4 years	5.4	6.4	(a)	2.4	.....	(a)
5 years	4.8	5.6	(a)	2.4	.....	.....
6 to 9 years	22.8	25.4	(a)	11.8	.....	(a)
10 to 14 years	26.8	26.0	(a)	30.8	.....	(a)
15 years and over	5.2	3.2	.....	14.7	.....	.....
Not stated	19.6	17.3	(a)	23.7	(a)	(a)

a Per cent not shown where base is less than 100.

No general conclusion can be made from figures in Table V.

TABLE VI.—*Per cent distribution, by literacy, of juvenile delinquents 10 years of age and over, committed during 1904, classified by sex, color, nativity, and race.*

Literacy.	Per cent distribution of juvenile delinquents 10 years of age and over committed during 1904.											
	Aggregate.	White.							Colored.			
		Total.	Native.				Foreign born.	Nativity unknown.	Total.	Negro.	Mongolian.	Indian.
			Total.	Native parentage.	Foreign parentage.	Mixed parentage.[a]	Parentage unknown.					
Both sexes:												
All classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(b)	100.0	100.0	(b)	(b)
Literate	85.3	87.0	88.1	87.2	88.6	91.3	85.3	79.0	(b)	74.3	74.8	(b)	(b)
Illiterate	12.1	10.3	9.1	10.2	8.0	6.4	10.8	20.1	(b)	23.9	23.4	.....	(b)
Can read but not write	1.9	1.8	1.7	1.7	1.7	1.6	2.5	2.6	.....	2.7	2.7	.....	(b)
Can neither read nor write	10.2	8.5	7.4	8.5	6.4	4.9	8.3	17.5	(b)	21.2	20.7	.....	(b)
Literacy not stated	2.6	2.7	2.9	2.6	3.3	2.3	3.9	0.9	(b)	1.8	1.8	.....	.....
Males—												
All classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(b)	100.0	100.0	(b)	(b)
Literate	84.7	86.5	87.6	86.6	88.3	90.7	84.0	78.1	(b)	72.4	73.0	(b)	(b)
Illiterate	12.4	10.4	9.1	10.4	8.0	6.7	9.7	20.9	.....	25.6	25.0	.....	(b)
Can read but not write	2.0	1.9	1.8	1.7	1.8	1.6	3.3	2.9	.....	2.7	2.7	.....	(b)
Can neither read nor write	10.4	8.5	7.3	8.7	6.2	5.1	6.3	18.0	.....	22.9	22.3	.....	(b)
Literacy not stated	2.9	3.1	3.3	3.0	3.7	2.6	6.3	1.0	(b)	1.9	2.0	.....	.....
Females—												
All classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(b)	(b)	100.0	100.0	.....	(b)
Literate	89.4	90.5	90.8	90.6	91.3	94.5	87.4	(b)	(b)	83.5	83.4	.....	(b)
Illiterate	10.3	9.3	9.0	9.2	8.7	4.9	12.6	(b)	(b)	15.3	15.4	.....	.....
Can read but not write	1.4	1.2	1.3	1.7	0.8	1.2	1.1	.....	.....	2.4	2.4	.....	.....
Can neither read nor write	8.9	8.1	7.7	7.6	7.9	3.7	11.5	(b)	(b)	12.9	13.0	.....	.....
Literacy not stated	0.3	0.2	0.2	0.2	.....	0.6	.....	.....	.....	1.2	1.2	.....	.....

[a] Having one parent native and the other foreign, or one parent unknown and the other either native or foreign.
[b] Per cent not shown where base is less than 100.

Table VI shows the native white delinquents of native parentage to have a larger proportion of illiterates than the native white of foreign parentage. This is probably due to the concentration of foreign born in cities where schools are better than in the country. Boys (84.7) show less literacy than girls (89.4).

XVI.—STATISTICS OF PRISONERS IN THE UNITED STATES.[a]

Prison statistics may indicate a probability as to the increase or decrease of crime, but not a certainty, for they do not include many who escape imprisonment by the payment of a fine, or suspension of sentence, or other method.

According to the census report imprisonment for minor offenses is gradually being supplanted by reformatory methods. Many who formerly would have been sent to prison are now placed on probation, or treated in other ways than by imprisonment. This is especially true of young criminals who ten years ago formed a not inconsiderable part of prison population. A decrease in prison population, therefore, would not indicate necessarily a decrease in crime.

In examining Table I it is to be noted that the returns for 1904 are restricted to institutions containing persons actually sentenced for crime, while the returns for 1890 include all institutions in which persons were detained, whether for an offense committed or for other reasons. The total number of prisoners for 1890 is 82,329 or 100.6 per 100,000 of the population.

[a] As in former section (xv), conclusions are taken and tables selected from Census Report.

TABLE I.—NUMBER AND RATIO OF PRISONERS ENUMERATED ON DATE OF CENSUS, FOR STATES AND TERRITORIES 1904 AND 1890.

State or Territory.	June 30, 1904.			June 1, 1890.			Increase (+) or decrease (−) of prisoners, 1890 to 1904		Rank of State, by ratio of prisoners to population.	
	General population.[a]	Prisoners.		General population.	Prisoners.					
		Number.	Number per 100,000 of population.		Number.	Number per 100,000 of population.	Number.	Number per 100,000 of population.	June 30, 1904.	June 1, 1890.
Continental United States	81,301,848	81,772	100.6	62,622,250	82,329	131.5	−557	−30.9	.....	.....
North Atlantic division	22,532,917	27,389	121.6	17,401.545	28,258	162.4	−869	−40.8	.....	.....
Maine	708,096	496	70.0	661,086	512	77.4	−16	−7.4	38	41
New Hampshire	425,904	416	97.7	376,530	321	85.3	+95	+12.4	25	37
Vermont	348,222	274	78.7	332,422	200	60.2	+74	+18.5	33	44
Massachusetts	3,036,626	5,684	187.2	2,238,943	5,227	233.5	+457	−46.3	8	5
Rhode Island	462,468	604	130.6	345,506	560	162.1	+44	−31.5	14	14
Connecticut	974,635	1,125	115.4	746,258	1,026	137.5	+99	−22.1	17	20
New York	7,785,730	9,862	126.7	5,997,853	11,468	191.2	−1,606	−64.5	15	9
New Jersey	2,062,821	2,720	131.9	1,444,933	2,455	169.9	+265	−38.0	13	12
Pennsylvania	6,728,415	6,208	92.3	5,258,014	6,489	123.4	−281	−31.1	27	27
South Atlantic division	11,090,917	11,150	100.5	8,857,920	11,409	128.8	−259	−28.3	.....	.....
Delaware	191,366	160	83.6	168,493	139	82.5	+21	+1.1	30	38
Maryland	1,247,518	1,867	149.7	1,042,390	1,502	144.1	+365	+5.6	11	16
District of Columbia	298,453	46	15.4	230,392	496	215.3	−450	−199.9	48	7
Virginia	1,935,116	1,895	97.9	1,655,980	2,000	120.8	−105	−22.9	24	29
West Virginia	1,038,837	1,129	109.6	762,794	450	59.0	+689	+50.6	19	45
North Carolina	2,006,453	1,185	59.1	1,617,947	2,033	125.7	−848	−66.6	42	26
South Carolina	1,417,560	1,045	73.7	1,151,149	1,184	102.9	−139	−29.2	36	[b]32
Georgia	2,371,081	2,579	108.8	1,837,353	2,938	159.9	−359	−51.1	20	15
Florida	584,533	1,234	211.1	391,422	667	170.4	+567	+40.7	4	11
North Central division	27,912,470	21,000	75.2	22,362,279	19,854	88.8	+1,146	−13.6	.....	.....
Ohio	4,355,676	3,363	77.2	3,672,316	2,909	79.2	+454	−2.0	34	40
Indiana	2,648,786	2,138	80.7	2,192,404	1,988	90.7	+150	−10.0	31	36
Illinois	5,227,923	3,180	60.8	3,826,351	3,936	102.9	−756	−42.1	41	[b]32
Michigan	2,532,288	1,995	78.8	2,093,889	2,155	102.9	−160	−24.1	32	[b]32
Wisconsin	2,222,457	1,366	61.5	1,686,880	1,118	66.3	+248	−4.8	40	42
Minnesota	1,931,514	1,067	55.2	1,301,826	1,041	80.0	+26	−24.8	44	39
Iowa	2,362,340	1,255	53.1	1,911,896	1,016	53.1	+239	.....	46	[c]47
Missouri	3,281,219	2,793	85.1	2,679,184	2,833	105.7	−40	−20.6	29	[c]31
North Dakota	371,478	203	54.6	182,719	97	53.1	+106	+1.5	45	[c]47

South Dakota	423,199	245	57.9	328,808	178	54.1	+67	+3.8	43	46
Nebraska	1,067,786	519	48.6	1,058,910	655	61.9	−136	−13.3	47	43
Kansas	1,487,804	2,876	193.3	1,427,096	1,928	135.1	+948	+58.2	7	21
South Central division	15,268,265	14,614	95.7	10,972,893	16,084	146.6	−1,470	−50.9	.....	.....
Kentucky	2,264,994	2,221	98.1	1,858,635	2,110	113.5	+111	−15.4	23	30
Tennessee	2,123,965	1,997	94.0	1,767,518	2,451	138.7	−454	−44.7	26	19
Alabama	1,957,445	2,068	105.6	1,513,017	2,518	166.4	−450	−60.8	21	13
Mississippi	1,658,119	1,238	74.7	1,289,600	1,177	91.3	+61	−16.6	35	35
Louisiana	1,489,033	1,680	112.8	1,118,587	1,608	143.8	+72	−31.0	18	17
Texas	3,390,759	4,504	133.2	2,235,523	4,747	212.3	−243	−79.1	12	8
Indian Territory	478,578	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oklahoma	528,940	22	4.2	61,834	.....	.....	+22	+4.2	49	.....
Arkansas	1,386,432	884	63.8	1,128,179	1,473	130.6	−589	−66.8	39	23
Western division	4,497,279	7,619	169.4	3,027,613	6,724	222.1	+895	−52.7	.....	.....
Montana	284,330	571	200.8	132,159	432	326.9	+139	−126.1	6	3
Wyoming	104,773	230	219.5	60,705	74	121.9	+156	+97.6	3	28
Colorado	591,334	1,022	172.8	412,198	902	218.8	+120	−46.0	9	6
New Mexico	209,614	265	126.4	153,593	205	133.5	+60	−7.1	16	22
Arizona	137,096	318	232.0	59,620	250	419.3	+68	−187.3	2	1
Utah	303,687	223	73.4	207,905	269	129.4	−46	−56.0	37	[d] 24
Nevada	42,335	129	304.7	45,761	152	332.2	−23	−27.5	1	2
Idaho	191,670	196	102.3	84,385	150	177.8	+46	−75.5	22	10
Washington	583,792	911	156.0	349,390	452	129.4	+459	+26.6	10	[d] 24
Oregon	452,667	399	88.1	313,767	440	140.2	−41	−52.1	28	18
California	1,595,981	3,355	210.2	1,208,130	3,398	281.3	−43	−71.1	5	4

[a] Estimated.
[b] South Carolina, Illinois, and Michigan show a ratio of 102.9 each.
[c] Iowa and North Dakota show a ratio of 53.1 each.
[d] Utah and Washington show a ratio of 129.4 each.

The groups excluded amount in numbers to 15,526, which, deducted from the total of 1890, leaves 66,803 sane persons at least 5 years of age serving sentences in prison, which is equivalent to a ratio of 106.7 per 100,000 of the population, showing a small relative decrease for 1904; but, as has been indicated, this does not necessarily prove less crime, but simply a decrease in the number of persons sentenced to imprisonment. In fact, as this decrease is small, the probability is that there is a relative increase of those sentenced, for, as already mentioned, a large number who in 1890 would have been sent to prison in 1904 have been placed on probation or treated in some other way than by imprisonment.

From Table I it will be seen that 12 States show a relative increase of prisoners, which is still greater owing to the exclusion of 15,526 mentioned above. Wyoming (97.6), Kansas (58.2), West Virginia (50.6), Florida (40.7), and Washington (26.6) show large relative increases.

TABLE II.—*Per cent distribution, by sex, of prisoners enumerated June 30, 1904, and June 1, 1890, for main geographic divisions.*

Sex.	Per cent distribution of prisoners.					
	Continental United States.	North Atlantic division.	South Atlantic division.	North Central division.	South Central division.	Western division.
	Enumerated June 30, 1904.					
Both sexes	100.0	100.0	100.0	100.0	100.0	100.0
Males	94.5	90.8	94.5	97.0	96.2	97.6
Females	5.5	9.2	5.5	3.0	3.8	2.4
	Enumerated June 1, 1890.					
Both sexes	100.0	100.0	100.0	100.0	100.0	100.0
Males	92.2	88.1	92.1	95.1	94.1	97.1
Females	7.8	11.9	7.9	4.9	5.9	2.9

Table II indicates for each geographic division a larger per cent of females for 1890 than in 1904, showing a decrease as compared with male prisoners.

TABLE III.—*Per cent distribution of white prisoners for 1904 and 1890.*

Division.	White prisoners of known nativity.			
	Per cent native.		Per cent foreign born.	
	1904.	1890.	1904.	1890.
Continental United States	76.3	71.8	23.7	28.3
North Atlantic	67.3	65.6	32.7	34.4
South Atlantic	93.5	89.6	6.5	10.4
North Central	84.0	76.4	16.0	23.6
South Central	89.5	83.9	10.5	16.2
Western	74.9	67.2	25.1	32.8

It will be observed in Table III that there is an increase of native white prisoners and decrease of foreign born and this is true of each geographic division. The common statement that foreign born contribute more than their share to the prisons is not supported by careful investigation.

From Table IV it will be seen that crimes against property are the most numerous (41.2) as compared with crimes against society (37.6) and crimes against the person (20.6). But in the South Atlantic States crimes against the person are most numerous (42.4), and crimes against property (42.1) come next in order of frequency, which is also true of the South Central States.

In the North Central, Western, and North Atlantic States crimes against property are more numerous than crimes against the person.

The greater frequency of crimes against society in the North Atlantic States is due perhaps to the larger city population, where such crimes are more liable to develop.

The wide variations of the percentages, especially in those representing crimes against society, according to the census report, does not point to a corresponding frequency or infrequency of such crimes in the different parts of our country, but largely to differences in methods of dealing with the offences. Yet in the case of homicide, it will be found to be much more common in some States than others, as shown in the following table:

TABLE IV.—*Distribution, by class of offenses, of prisoners enumerated June 30, 1904, classified by sex, for main geographic divisions.*

Sex and class of offenses.	Prisoners enumerated June 30, 1904.											
	Number.						Per cent distribution.					
	Continental United States.	North Atlantic division.	South Atlantic division.	North Central division.	South Central division.	Western division.	Continental United States.	North Atlantic division.	South Atlantic division.	North Central division.	South Central division.	Western division.
Both sexes	81,772	27,389	11,150	21,000	14,614	7,619	100.0	100.0	100.0	100.0	100.0	100.0
Against society	17,739	10,290	1,467	3,473	1,257	1,252	21.7	37.6	13.2	16.5	8.6	16.4
Against the person	26,017	5,645	4,724	6,357	6,711	2,580	31.8	20.6	42.4	30.3	45.9	33.9
Against property	37,166	11,272	4,692	10,951	6,587	3,664	45.5	41.2	42.1	52.1	45.1	48.1
Double crimes	126	47	29	16	23	11	0.2	0.2	0.3	0.1	0.2	0.1
Unclassified	127	34	6	67	19	1	0.2	0.1	0.1	0.3	0.1	[a]
Offense not stated	597	101	232	136	17	111	0.7	0.4	2.1	0.6	0.1	1.5
Males	77,269	24,882	10,535	20,361	14,055	7,436	100.0	100.0	100.0	100.0	100.0	100.0
Against society	15,190	8,354	1,312	3,181	1,195	1,148	19.7	33.6	12.5	15.6	8.5	15.4
Against the person	25,172	5,499	4,504	6,205	6,421	2,543	32.6	22.1	42.8	30.5	45.7	34.2
Against property	36,097	10,859	4,474	10,762	6,380	3,622	46.7	43.6	42.5	52.9	45.4	48.7
Double crimes	117	41	29	13	23	11	0.2	0.2	0.3	0.1	0.2	0.1
Unclassified	123	32	6	65	19	1	0.2	0.1	0.1	0.3	0.1	[a]
Offense not stated	570	97	210	135	17	111	0.7	0.4	2.0	0.7	0.1	1.5
Females	4,503	2,507	615	639	559	183	100.0	100.0	100.0	100.0	100.0	100.0
Against society	2,549	1,936	155	292	62	104	56.6	77.2	25.2	45.7	11.1	56.8
Against the person	845	146	220	152	290	37	18.8	5.8	35.8	23.8	51.9	20.2
Against property	1,069	413	218	189	207	42	23.7	16.5	35.4	29.6	37.0	23.0
Double crimes	9	6	.....	3	.....	.....	0.2	0.2	.....	0.5	.....	.....
Unclassified	4	2	.....	2	.....	.....	0.1	0.1	.....	0.3	.....	.....
Offense not stated	27	4	22	1	.....	.....	0.6	0.2	3.6	0.2	.....	.....

[a] Less than one-tenth of 1 per cent.

TABLE V.—*Prisoners convicted of homicide.*

State or Territory.	June 30, 1904.	
	Number.	Number per 100,000 of population.
Continental United States	10,774	13.3
North Atlantic division	1,267	5.6
Maine	44	6.2
New Hampshire	23	5.4
Vermont	15	4.3
Massachusetts	120	4.0
Rhode Island	24	5.2
Connecticut	74	7.6
New York	472	6.1
New Jersey	121	5.9
Pennsylvania	374	5.6
South Atlantic division	2,364	21.3
Delaware	16	8.4
Maryland	124	9.9
District of Columbia	.....	.....
Virginia	261	13.5
West Virginia	263	25.3
North Carolina	263	13.1
South Carolina	340	24.0
Georgia	793	33.4
Florida	304	52.0
North Central division	2,352	8.4
Ohio	300	6.0
Indiana	178	6.7
Illinois	463	8.9
Michigan	173	6.8
Wisconsin	137	6.2
Minnesota	101	5.2
Iowa	116	4.9
Missouri	333	10.1
North Dakota	33	8.9
South Dakota	28	6.6
Nebraska	49	4.6
Kansas	441	29.6
South Central division	3,743	24.5
Kentucky	560	24.7
Tennessee	376	17.7
Alabama	628	32.1
Mississippi	444	26.8
Louisiana	540	36.3
Texas	995	29.4
Indian Territory	.....	.....
Oklahoma	.....	.....
Arkansas	200	14.4
Western division	1,048	23.3
Montana	99	34.8
Wyoming	41	39.1
Colorado	137	23.2
New Mexico	88	42.0
Arizona	81	59.1
Utah	18	5.9
Nevada	21	49.6
Idaho	32	16.7
Washington	82	14.0
Oregon	45	9.9
California	404	25.3

In proportion to population the North Atlantic States rank lowest in number of prisoners sentenced for homicide, with the North Central States next. The largest number of such prisoners in proportion to population was found in the South Central States. According to the census returns for 1904, as indicated in Table V, and according to

other tables (not given here), of the 26,017 prisoners sentenced for crimes against the person only 7.1 per cent were incarcerated for terms of less than one year, while 63.8 per cent served more than one year and 44.8 per cent five years or longer.

Under the group of crimes against the person were included 10,774 prisoners who had committed homicide; of this number 133 had been sentenced to death and 4,443 to life imprisonment. Therefore 6,198, or 57.5 per cent, of the prisoners sentenced for homicide received lighter penalties than death or imprisonment for life. This number probably represents persons guilty of such murders as fall within the statutory definitions of murder in the second degree and persons guilty of manslaughter.

Among the 462 women sentenced for homicide not one had been condemned to death, and only 159 had been sentenced to imprisonment for life; thus 303, or 65.6 per cent, escaped with lesser penalties. Indeed, since only 154 female prisoners guilty of homicide were sentenced to terms of more than nine years, it is evident that a good many of the female prisoners who had taken the life of another were sentenced to serve less than ten years. The fact that those sentenced to death or to life imprisonment formed a smaller proportion of the women convicted of homicide than of the men guilty of a crime of that class may have been due to either one of two causes or to a combination of the two. Possibly a larger proportion of the women were guilty of the less serious offenses, or women may have received less severe punishment.

Of the 81,772 prisoners, 133, or two-tenths of 1 per cent, were under death sentence, and 5,026, or 6.1 per cent, were serving life sentences, the largest numbers in the last-mentioned group occurring in the South Atlantic and South Central divisions. In this respect Georgia, with 566 life prisoners, ranked first among the States. In all, 12,352 were confined on an indeterminate sentence. Most of the States of the North Atlantic and North Central divisions and Colorado of the Western division employ some form of the indeterminate sentence. Generally, however, the codes prescribe a maximum and minimum sentence, so that the periods of incarceration are not, in the strict sense, indeterminate.

Massachusetts reported the lowest ratio of homicides to population (4) and Arizona the highest (59.1). Other States having high ratios were Florida (52), Nevada (49.6), New Mexico (42), Wyoming (39.1), Louisiana (36.3), Montana (34.8), and Georgia (33.4). The ratio for Kansas (29.6) is much higher than that for any other State in the North Central group, possibly because a United States prison is located in that State. States other than Massachusetts having noticeably low ratios were Vermont (4.3), Nebraska (4.6), Iowa (4.9), Rhode Island (5.2), New Hampshire (5.4), and Utah (5.9).

The second largest number of offenders against the person were those guilty of "assaults." The codes vary considerably in their definitions of the different kinds of assaults, as well as in the penalties prescribed for the various degrees of the offense. In some States fines are imposed as penalties for assaults that in other States would lead to imprisonment. For these reasons variations, which otherwise would be rather inexplicable, appear in the number of prisoners sentenced for assault.

Robbery and rape, on the other hand, are crimes that probably nowhere admit of a fine as the penalty.

Offenses against property.—The total number of prisoners convicted of offenses against property was 37,166. The distribution of these prisoners by specific offenses is shown in the following table:

TABLE VI.—*Prisoners enumerated, June 30, 1904, convicted of offenses against property.*

Offense.	Number.	Per cent distribution.
Total	37,166	100.0
Arson	636	1.7
Burglary	14,048	37.8
Larceny	18,514	49.8
Forgery	2,140	5.8
Fraud	873	2.3
Embezzlement	539	1.5
Malicious mischief and trespass	327	0.9
All other	89	0.2

More prisoners sentenced for arson were returned from the South Atlantic and South Central divisions than from the others.

Of the persons sentenced for crimes against property, 37.8 per cent had been guilty of one of the many forms of burglary, a crime most common in large urban communities, and usually punished by imprisonment in a State prison.

The percentage of offenders against property committed for larceny (49.8) does not appear as large as one would expect. The principal reason is that so many convicted of petit larceny are simply fined. The distinction made between petit and grand larceny is generally based upon the value of the property stolen. In one State the theft of articles to the value of less than $50 may be called petit larceny, while in another the theft of goods exceeding $25 in value is defined as grand larceny. These artificial distinctions lend different meanings to the returns of prisoners sentenced for larceny, as grand larceny almost universally carries the penalty of imprisonment, while persons guilty merely of petit larceny may escape with a fine.

Sex and class of offenses.—As shown in Table IV, the percentages for male prisoners vary but little from those for prisoners of both sexes, and this is largely due to the great preponderance of male prisoners. A smaller proportion of the males than of the females were imprisoned for crimes against society. More than one-half of the female prisoners in continental United States, or 56.6 per cent, had committed such offenses. Of these, 25.7 per cent had been sentenced for offending against chastity, while 74.3 per cent had been found guilty of offenses against public policy; drunkenness, vagrancy, and disorderly conduct, in the order named, being the specific offenses charged in most instances. The figures in Table IV show also that 18.8 per cent of the female prisoners in continental United States were committed for crimes against the person and 23.7 per cent for crimes against property.

The corresponding percentages for the main geographic divisions give a different idea of the usual crimes of female prisoners. More than one-half of all the female prisoners enumerated are credited to

the States of the North Atlantic group, and in this division 77.2 per cent had been imprisoned for crimes against society, 5.8 per cent for crimes against the person, and 16.5 per cent for crimes against property. The other geographic divisions show the following percentages of female prisoners sentenced for crimes against society: South Atlantic, 25.2; North Central, 45.7; South Central, 11.1; and Western, 56.8. These percentages have little bearing on the comparative prevalence of crimes against society among women of the different sections, but indicate the differences in the degree to which the population is centralized in urban communities and chiefly the variations in the standards of punishing female offenders by imprisonment. Violations by women of the laws concerning chastity are not confined to any particular section, yet, as shown in Table II, it is chiefly in the North Atlantic States, and to some extent in the North Central States, that females are found in prison for such violations.

The number of women imprisoned for crimes against the person, as shown in Table IV, must be presumed to bear a fairly definite relation to the total number of such crimes committed by women. Homicides, felonious assaults, and robbery, whether perpetrated by men or women, are uniformly punished, if at all, with a prison sentence. Of the 845 women in prison for crimes against the person, 462, or 54.7 per cent, had been sentenced for homicide; 219, or 25.9 per cent, for assault; and 132, or 15.6 per cent, for robbery. Female prisoners sentenced for homicide numbered 145 in the South Atlantic division and 146 in the South Central, as against 60 in the North Atlantic division, 88 in the North Central, and 23 in the Western. Both of the first mentioned divisions also had larger absolute numbers of female prisoners committed for assaults than the other sections of the United States; and the South Central division had the largest absolute number of women sentenced for robbery, while in the South Atlantic division the number was relatively larger than in the North or West. This predominance of grave crimes against the person in the parts of the country containing the largest numbers of colored inhabitants is probably due to a greater frequency of such crimes among negro women than among white. This statement, as will be shown later, is fully substantiated by the statistics of commitments during 1904.

Among the 1,069 female prisoners sentenced for crimes against property, 48, or 4.5 per cent, had been committed for arson; 102, or 9.5 per cent, for burglary; and 868, or 81.2 per cent, for larceny. Relatively more female prisoners in the South Atlantic and South Central divisions than in the others had been found guilty of arson and burglary; and again, this condition is probably explained by the greater criminal tendency of the colored women.

Among the 106 persons committed to prisons in 1904 under death sentence, 99 had been convicted of homicide, 4 of assaults, 2 of rape, and 1 of a double crime, murder being one of them. As 2,444 prisoners had been committed for homicide, the death sentence had been pronounced in 4.1 per cent of the cases.

The number of persons committed for homicide and the percentage sentenced to death are shown in the following table for each geographic division:

TABLE VII.—*Prisoners committed during 1904.*

Division.	Number.	Sentenced to death.	
		Number.	Per cent.
Continental United States	2,444	[a] 106	4.3
North Atlantic	305	38	12.5
South Atlantic	455	12	2.6
North Central	526	22	4.2
South Central	943	6	0.6
Western	215	28	13.0

[a] Includes 7 guilty of crimes other than homicide.

The percentages do not permit any reliable deductions in regard to the effect of the death penalty upon the rate of murder, since the figures include an unknown number of persons guilty of manslaughter. The acts which will result in an arrest for manslaughter differ widely in different States.

It is interesting to note that the percentage of persons guilty of homicide formed by those paying the death penalty was largest in the North Atlantic and Western divisions. The first mentioned has the lowest ratio of homicides in 1904, namely, 1.4 per 100,000 of population, while the Western States had a ratio of 4.8, or the second highest. In the six States excepting Pennsylvania, with the largest numbers committed for homicide, namely, Kentucky, 147; Tennessee, 134; Alabama, 120; Mississippi, 138; Louisiana, 154; and Texas, 150, only 4 of the great number of prisoners committed for homicide were condemned to die—3 in Texas and 1 in Mississippi.

Death sentences were pronounced upon 23 of the 126 persons committed for homicide in Pennsylvania, or upon 18.3 per cent of the whole number, and upon 14 of the 75 committed for the same offense in California, or 18.7 per cent. No other States show such absolute numbers of death sentences. Only 2 women were given the extreme penalty for murder—1 in Pennsylvania and 1 in Vermont.

Upon summarizing the penalties visited upon the prisoners of known sentence committed for homicide during 1904, it is found that 4.2 per cent had been sentenced to death, 24.7 per cent for life, 5.4 per cent on an indeterminate sentence, 2.5 per cent for less than one year, 26 per cent for terms of from one to five years, and 37.1 per cent for terms of from six to twenty-one years and over.

Life sentences had also been meted out to 28 prisoners for rape, to 4 for robbery, to 1 for assault, to 1 for the crime against nature, to 1 for perjury, to 2 for arson, to 12 for burglary, to 3 for larceny, and to 1 for other offenses "against property." Presumably in a number of these cases other crimes than those specified had been committed.

Marital condition and class of offenses.—Table VIII is designed to throw some light on the relation of marital condition to the various crime groups.

TABLE VIII.—*Per cent distribution, by marital condition, of major and minor offenders committed during 1904, classified by class of offenses.*

Marital condition.	Per cent distribution of prisoners committed during 1904 for offenses—				
	Against chastity.	Against public policy.	Against the person.	Against property.	All other.[a]
	Major offenders.				
All classes	100.0	100.0	100.0	100.0	100.0
Single	33.4	54.5	59.5	71.0	62.6
Married	58.4	39.5	35.6	24.9	29.4
Widowed	2.9	3.2	3.0	2.5	3.0
Divorced	1.7	.5	.7	.6	1.1
Unknown	3.6	2.5	1.1	1.0	3.8
	Minor offenders.				
All classes	100.0	100.0	100.0	100.0	100.0
Single	53.5	64.3	50.5	67.8	57.3
Married	31.1	24.4	39.8	22.6	19.6
Widowed	8.5	5.3	1.4	2.0	1.3
Divorced	1.3	.5	.4	.5	.4
Unknown	5.6	5.5	7.8	7.0	21.3

[a] Includes unclassified, not stated, and double crimes.

As the majority of the persons committed for major offenses against chastity had been guilty of adultery and bigamy (771 out of 1,167), it follows that in this crime group the proportion of single persons should be smaller than that of the married. Among the minor offenders against chastity the percentages in regard to marital condition are reversed, the proportion of single persons being much the larger. Of the other major offenders, those against public policy had the lowest percentage of single persons (54.5), and those against property the highest (71). Among the minor offenders those committed for offenses against property also show the highest percentage of single persons, while the lowest is shown for prisoners committed for offenses against the person.

Literacy.—Unfortunately statistics in regard to the degree of education received by criminals are usually based solely upon their ability to read and write. The bare ability to read and write does not necessarily imply a superior knowledge of right and wrong. In the present investigation the test of the degree of education acquired by prisoners could only be applied to their ability to read and write; and it may be assumed that many passed muster as literate whose capacity for reading and writing was of the most rudimentary character.

Table IX gives, for main geographic divisions, the per cent distribution, by literacy, of the prisoners committed during 1904, classified as major and minor offenders.

TABLE IX.—*Per cent distribution, by literacy, of prisoners committed during 1904, classified as major and minor offenders, for main geographic divisions.*

Literacy.	Per cent distribution of prisoners committed during 1904.					
	Continental United States.	North Atlantic division.	South Atlantic division.	North Central division.	South Central division.	Western division.
Total.						
All classes	100.0	100.0	100.0	100.0	100.0	100.0
Literate	83.0	88.4	59.4	85.7	56.9	82.3
Illiterate	12.6	10.3	32.6	6.9	34.6	9.6
Can read but not write	1.1	.9	1.7	1.0	3.8	.6
Can neither read nor write	11.5	9.5	30.9	5.9	30.8	9.1
Literacy not stated	4.3	1.3	7.9	7.4	8.5	7.1
Major offenders.						
All classes	100.0	100.0	100.0	100.0	100.0	100.0
Literate	78.7	86.0	63.6	89.2	55.2	89.0
Illiterate	19.9	13.3	33.7	10.1	41.1	10.9
Can read but not write	1.9	1.3	1.6	1.3	4.9	.6
Can neither read nor write	18.0	12.0	32.1	8.8	36.3	10.3
Literacy not stated	1.4	.6	2.7	.7	3.7	.1
Minor offenders.						
All classes	100.0	100.0	100.0	100.0	100.0	100.0
Literate	84.0	88.7	57.2	84.9	58.5	84.9
Illiterate	10.9	9.9	32.1	6.1	28.5	9.3
Can read but not write	1.0	.8	1.8	1.0	2.8	.6
Can neither read nor write	10.0	9.1	30.3	5.1	25.6	8.7
Literacy not stated	5.0	1.3	10.8	9.0	12.9	5.8

The proportion of prisoners who were literate was smallest in the South Central States (56.9 per cent), and only slightly larger in the South Atlantic States (59.4 per cent). In these two divisions the majority of the prisoners were negroes, who, as a race, are very illiterate. In the North Atlantic division 88.4 per cent of the prisoners, or about 7 in every 8, were literate, this proportion being the largest shown for any of the divisions. In the North Central division 85.7 per cent were reported as being able to read and write, and in the Western division 82.3 per cent.

Occupation and class of offenses.—Table X shows the per cent distribution, by class of offenses, of male prisoners committed during 1904 whose previous occupation is known, classified as major and minor offenders and by occupation.

TABLE X.—*Per cent distribution, by class of offenses, of male prisoners committed during 1904 whose occupation prior to commitment is known, classified as major and minor offenders, and by occupation.*

Occupation.	Male prisoners committed during 1904 whose occupation prior to commitment is known; per cent convicted of offenses—				
	Against chastity.	Against public policy.	Against the person.	Against property.	All other.[a]
	Total.				
All occupations	1.8	59.1	11.2	26.6	1.3
Professional	2.4	42.9	11.1	40.9	1.7
Clerical and official	1.5	40.8	6.5	49.8	1.4
Mercantile and trading	2.1	51.3	10.0	35.2	1.4
Public entertainment	3.9	58.0	13.7	22.5	1.9
Personal service, police, and military	2.9	46.8	14.4	34.4	1.4
Laboring and servant	1.7	62.9	10.4	23.5	1.4
Manufacturing and mechanical industry	1.7	63.0	9.0	25.3	1.0
Agriculture, transportation, and other outdoor	1.8	49.2	17.0	30.7	1.4
All other occupations	1.1	44.3	11.1	42.4	1.1
	Major offenders.				
All occupations	3.3	8.0	28.7	59.1	0.8
Professional	6.5	8.6	18.5	65.7	0.7
Clerical and official	2.4	12.0	10.7	73.3	1.6
Mercantile and trading	3.7	9.3	21.7	64.3	1.0
Public entertainment	5.6	13.4	30.2	49.7	1.1
Personal service, police, and military	4.5	6.0	29.1	59.3	1.1
Laboring and servant	2.9	8.4	31.3	56.5	0.9
Manufacturing and mechanical industry	4.2	7.1	23.0	65.0	0.8
Agriculture, transportation, and other outdoor	3.0	7.6	34.2	54.5	0.6
All other occupations	1.7	6.1	19.8	72.0	0.3
	Minor offenders.				
All occupations	1.4	71.9	6.8	18.4	1.4
Professional	1.7	61.9	7.0	27.1	2.3
Clerical and official	1.0	56.5	4.2	36.9	1.3
Mercantile and trading	1.6	65.1	6.2	25.7	1.5
Public entertainment	3.4	69.4	9.5	15.5	2.1
Personal service, police, and military	2.2	64.0	8.3	23.9	1.6
Laboring and servant	1.5	73.2	6.5	17.3	1.4
Manufacturing and mechanical industry	1.1	75.7	5.8	16.4	1.0
Agriculture, transportation, and other outdoor	1.2	66.6	9.7	20.8	1.7
All other occupations	0.8	61.6	7.2	29.0	1.5

[a] Includes unclassified, not stated, and double crimes.

Among the major male criminals those who had been engaged in professional pursuits show the largest percentage of offenders against chastity, namely, 6.5 per cent, and those engaged in public entertainment, the second largest, 5.6 per cent. The prisoners of the last mentioned occupation show the largest percentage of major offenders against public policy (13.4), followed by the clerical and official, with 12 per cent. Major offenders who had been engaged in agricultural and kindred pursuits show the largest percentage (34.2) committed for crimes against the person; the laboring and servant class coming next, with 31.3 per cent; and the public entertainment group third, with 30.2 per cent. In every occupation group, crimes against property were the most common of the major offenses, offenders against property constituting more than 50 per cent of the total number of

major offenders in each group except that of public entertainment. Of the major offenders who had been engaged in clerical and official pursuits, 73.3 per cent, or almost 3 in every 4, had committed crimes against property, while of those who had been engaged in professional and in manufacturing and mechanical pursuits, about 2 in every 3 (65.7 and 65 per cent, respectively) had been convicted of these crimes.

If the figures for the minor offenders are considered, it will be noted that crimes against chastity were most conspicuous among the prisoners who had been engaged in public entertainment and in personal service. As the minor offenders against public policy were mostly committed for drunkenness, disorderly conduct, and vagrancy, it conforms with common observation to find the largest percentages in this class among those who had been occupied as laborers and servants and in factories and mills. It should be noted, however, that in every occupation group more than one-half of the minor offenders had committed crimes against public policy; the lowest percentage (56.5) being shown for those engaged in clerical and official pursuits. The latter group shows the largest percentage (36.9) convicted of minor offenses against property, while the mercantile and trading class of prisoners comes next, with 25.7 per cent.

The per cent distribution, by class of offenses, of female prisoners, classified by previous occupation, is shown in Table XI, and does not call for any special comment. It should be noted, however, that only those occupations in which 100 or more female prisoners were engaged prior to incarceration are shown separately in this table.

TABLE XI.—*Per cent distribution, by class of offenses, of female prisoners committed during 1904 whose occupation prior to commitment is known, classified as major and minor offenders, and by occupation.*[a]

Occupation.	Female prisoners committed during 1904 whose occupation prior to commitment is known; per cent convicted of offenses—				
	Against chastity.	Against public policy.	Against the person.	Against property.	All other.[b]
	Total.				
All occupations	12.6	64.5	6.5	15.7	0.7
Laundresses	8.8	60.1	12.1	18.4	0.6
Servants	12.8	65.5	5.7	15.5	0.5
Mill and factory operatives (textiles)	12.2	83.6	0.6	3.6	.....
Dressmakers and seamstresses	12.6	56.3	10.1	21.1	.....
All other occupations	13.7	54.0	11.7	17.9	2.7
	Major offenders.				
All occupations	17.7	6.5	24.9	50.1	0.7
Servants	18.1	6.9	21.5	52.6	0.9
All other occupations	18.8	5.4	33.0	42.9	.....
	Minor offenders.				
All occupations	11.9	72.3	4.0	11.1	0.7
Laundresses	9.9	72.1	5.5	12.1	0.4
Servants	12.1	72.5	3.8	11.1	0.5
Mill and factory operatives (textiles)	8.7	87.8	0.6	2.9	.....
Dressmakers and seamstresses	12.4	71.2	3.3	13.1	.....
All other occupations	12.5	64.5	7.1	12.5	3.3

[a] Only those occupations in which 100 or more female prisoners were employed are reported separately.

[b] Includes unclassified, not stated, and double crimes.

XVII.—PSYCHO-PHYSICAL AND ANTHROPOMETRICAL INSTRUMENTS OF PRECISION.[a]

INTRODUCTION.

A thorough study of any human being can not be made without instruments of precision. Such an investigation of living man is one of the most recent tendencies of science. It is paradoxical that man is the last object to be thoroughly studied by man. Instruments of precision have been employed more extensively, perhaps, in the study of the abnormal, as illustrated in criminology, but it is time they were used in the investigation of normal man.

An instrumental method of inquiry is a more exact way of ascertaining the effects of mental, moral, and physical forces upon the body, of many of which we are unconscious. The facts thus obtained bear the closest relation to new questions in the development and education of man.

LIMITATION OF THE SENSES.

Science in its efforts to seek the truth has a special difficulty to contend against; it is the defectiveness or limitation of our senses. Instruments of precision are for the purpose of correcting these defects by increasing the scope of the senses, so that, when truth may be found, it may be described more fully and determined more definitely.

In ancient times there were instruments to measure the weight and height, etc., or what is called the static condition. Subsequently dynamic movements, electric currents, variations of temperature, etc., were studied, but our senses were too slow and confused to determine these conditions, so instruments were necessary to measure the very small in time and in motion.

The Graphic Method.

The graphic method was employed to translate those changes of the activity of forces into the language of the changes themselves, which words can not do. Writing consists in signs more or less conventional, but the graphic method is natural; it is a universal language, as expressed in the line or the curve.

Descartes inaugurated the graphic expression of ideas. This method was then soon used to represent diverse variations, as the comparison of economical and social phenomena. Tables were published in England, then in France, showing the curves representing successive variations of population, wealth, agricultural production, etc. Since then this method has been enlarged so as to apply to all sorts of things. It gives clearness and conciseness to its representations.

Instruments of precision through the graphic method furnish a mode of expression and a means of research. Every science accumulates facts and observations and compares them to show the relation of

[a] Extended lists of instruments for equipment of a laboratory are given in "Man and Abnormal Man," pages 217-223.

cause and effect. Those comparisons are the more important the larger the number of data, but this often gives rise to extreme complexity. The graphic method can reduce these data to a curve that will give clearness and definiteness to their meaning. Nature's processes are often so complex that it is impossible to give attention to many associated phenomena at a time. Instruments of precision with their tracings can record the different movements.

The intention of this chapter is to give a general idea of the more recent instruments of precision, especially those which apply to the nervous system.

Instruments of Precision.

Perhaps one of the most useful and important instruments of precision is the kymographion, which is a sort of typewriter for the laboratory.

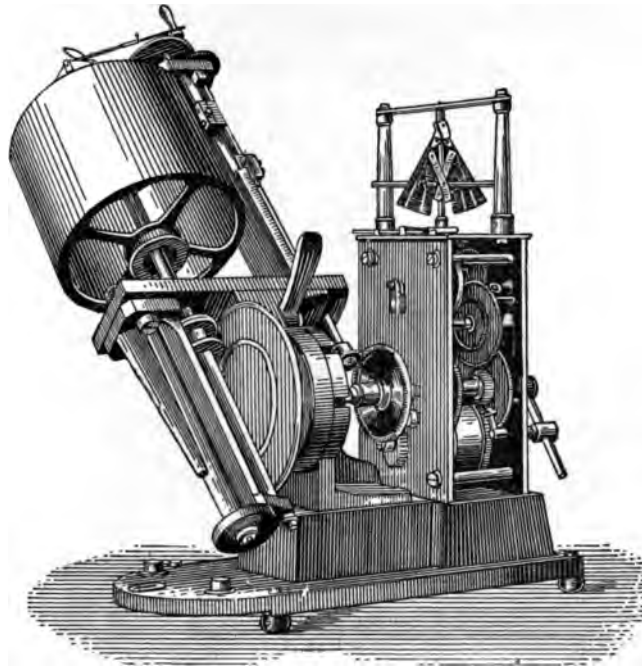


Fig. 1.—Ludwig's kymographion.

The kymographion (fig. 1) is an instrument to furnish uniform motion. It records experiments by movements of a marker or index on smoked paper, which has been wrapped around a revolving cylinder. The kymographion of Ludwig furnishes motion to the cylinder or it may be used as a motor for other light apparatus.

The cylinder is brass and rotates by clockwork. A sheet of glazed paper is wrapped around the cylinder; one end of the paper is gummed and is joined to the other end. The paper is smoked by holding the cylinder over a paraffine lamp, candle, or gas jet. After the tracings are finished the paper is removed from the drum or cylinder and passed through a thin varnish, which when dry makes the tracings permanent. In the most recent form of the instrument, as in the figure, the cylinder can be placed in either a vertical, diagonal, or horizontal position. Any

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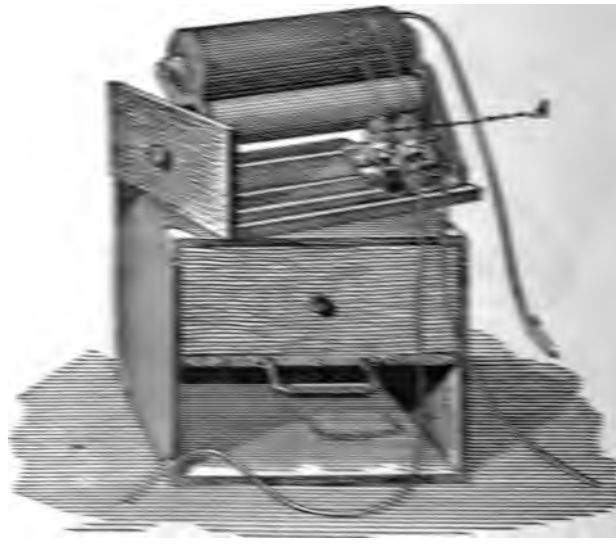

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Different speeds can be obtained by changing the position of the wings (a) of the regulator. The one in the laboratory of this bureau has been made portable by having a case made for it. The maker is Verdin, of Paris.

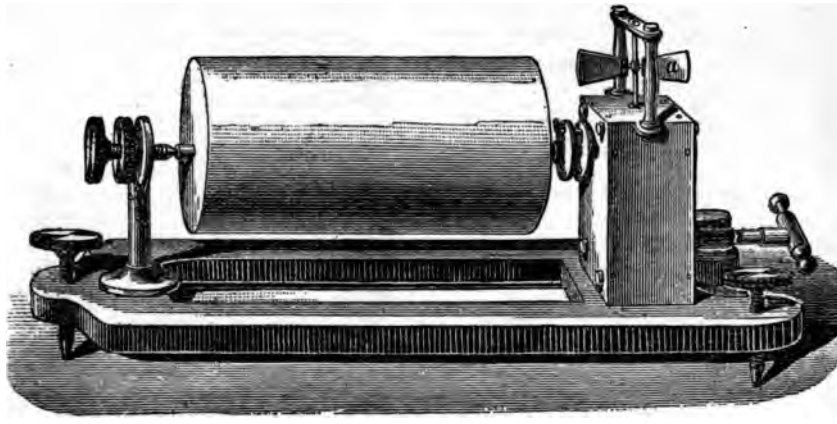

FIG. 3.—Small polygraph.

HIPP-CHRONOSCOPE.

The standard instrument for measuring time relations is the Hipp-Chronoscope (fig. 4). It consists of clockwork moved by a weight. There are two dials, the hands of which can be thrown in and out of gear. Either a glass or a wooden case covers the clockwork. This instrument measures to thousandths of a second. In using this instrument, electric keys, commutators, batteries, testing apparatus, etc., are required. Maker, Krille, Leipzig.

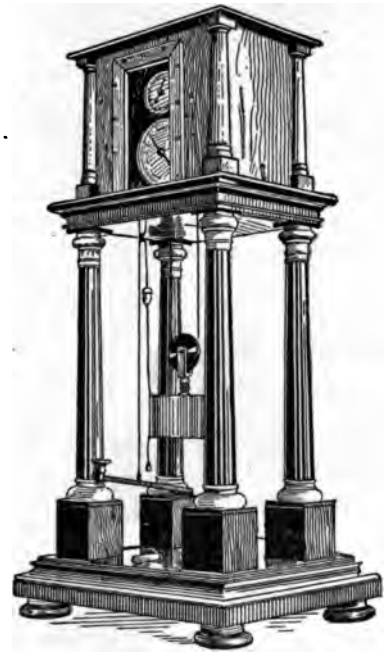

FIG. 4.—Hipp-Chronoscope.

THE VERNIER CHRONOSCOPE.[1]

The essential part of the instrument is the pair of unequal pendulums at the left. The longer of these is of such a length as to make one complete swing (i. e., to traverse its arc and return to the same point) in 0.80 seconds; the shorter makes a complete swing in 0.78 seconds, thus gaining 0.02 seconds at each of its swings, and fixing the unit of measurement of the instrument at one-fiftieth of a second. With these rates, if both pendulums start together, the shorter will gain a whole swing of the longer, and they will be together again after forty of its swings; 0.80—0.02 = 40. If the shorter starts later than the longer, it will gain, as before, at the rate of one-fiftieth of a second per swing; and in order to know in fiftieths of a second the interval by which it started later, it will only be necessary to count its swings until it catches up; and in general to measure any short interval it will only be necessary to start the longer

[1] Professor Sanford has given a detailed account of his instrument in the American Journal of Psychology, vol. 9, No. 2.

pendulum at the beginning and the shorter at the end, and to count the swings of the shorter up to and including a coincidence. The number counted is the interval expressed in the units of gain—that is, in fiftieths of a second.

The base of the instrument is of cast iron. On one corner of it rises a column 7½ inches high, which, with the little platform supporting the keys, is cast in one piece with the base. From the top of the column an arm extends forward over the base 3½ inches. The pendulums are released from the keys at the right in the cut.

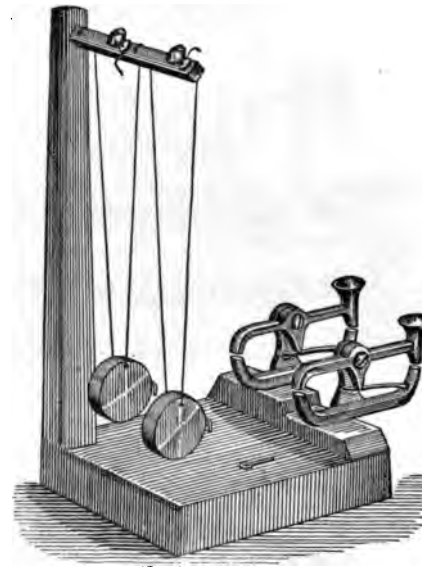

FIG. 5.— Vernier chronoscope. (Sanford.)

While the instrument is primarily intended for demonstration purposes, yet it can be used for research where a unit of one-fiftieth of a second is sufficiently small.

The instrument can be obtained at Clark University, Worcester, Mass.

TUNING-FORK STAND.

In fig. 6 below is represented a tuning-fork stand for making electrical contact 50, 100, or 200 times per second by means of tuning forks the vibrations of which are electrically maintained. Any of the tuning forks can be fixed in the slot in the heavy cast-iron block. A platinum wire *A* projects vertically downward from the lower prong of the fork, and at each vibration dips into a cup containing mercury and completes an electrical circuit. The current thus formed is taken to a small electro-magnet *B* placed between the prongs of the fork. The ebonite block supporting the electro-magnet and the mercury cup can slide along a rod *C* to suit the lengths of the various forks. The level of the mercury in the cup can be adjusted by a screw plunger. The mercury can be kept clean by passing a continuous stream of water over its surface. The supply of water must be taken to the instrument by india-rubber tubing. The amplitude of the vibration of the fork can be varied by a lateral adjustment of the electro-magnet; a vertical adjustment

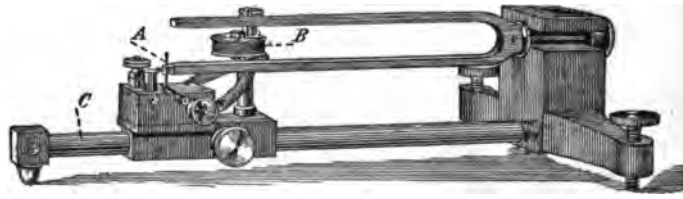

FIG. 6.—Tuning-fork stand.

also allows the electro-magnet to be fixed at an equal distance from each prong of the fork. The feet should stand upon three pieces of india-rubber tubing; when this is done the vibrations transmitted to the table are lessened, and the fork vibrates more readily. Maker: Cambridge Scientific Instrument Company, Cambridge, England.

PENDULUM CHRONOSCOPE.

The pendulum chronoscope, as represented in fig. 7, was designed and constructed by Professor Scripture,[1] of the psycho-physical laboratory of Yale University.

[1] *Studies from* the Yale psychological laboratory, Vol. III, 1895.

This instrument is designed to meet the following requirements: (1) Accuracy to the thousandth of a second; (2) ease of transportation; (3) readiness of setting up; (4) quickness in reading; (5) availability for many kinds of experiments on time.

The instrument contains a double bob, which is held by a catch at the right-hand side. When this catch is pressed the pendulum starts its swing, soon reaching a light pointer held in position by a delicate spring, which it carries along. At the exact moment the pendulum takes up the pointer it presses a catch which releases the mechanism beneath the base; this mechanism causes a shutter to drop, thus covering an opening in a metal plate at the back of the chronoscope. The person to be experimented upon is seated at the back; a curtain keeps him from seeing anything except the metal plate with the covered opening. He presses a rubber button as soon as he sees the shutter move, and a horizontal bar is released running behind the scale. The pointer swings between this bar and the scale, and is consequently stopped when the bar snaps against the scale. The pointer starts to move as soon as the shutter starts to fall, and consequently any time that elapses thereafter will be indicated by the distance through which the pointer travels before being caught. The connection of the pointer with the pendulum is so delicate that it continues its swing until it is caught on the other side.

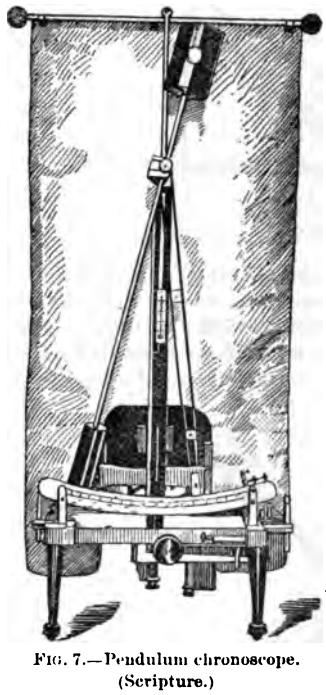

FIG. 7.—Pendulum chronoscope. (Scripture.)

Electrical contacts are arranged so that the units of the scale always indicate the elapsed time between the starting of the shutter and the pressing of the button; that is, all lost time in the action of the mechanism is taken up in the scale, which is marked in hundredths and half-hundreths, which, by the eye, can be easily divided into fifths, thus giving records in thousandths of a second.

For reactions to sound, the shutter is so arranged as to strike with a noise; for reactions to light, colored cards are placed in a holder behind the shutter, or a reflecting surface at this point receives light from the side and sends it through colored glass or gelatin.

The instrument is made at the Yale laboratory, New Haven, Conn.

A LOCATION REACTION APPARATUS.

Professor Fitz, of Harvard University, has designed an instrument for the purpose of testing the power of an individual to quickly and accurately touch an object suddenly disclosed in an unexpected position. The apparatus is so devised as to require the subject to make a movement of the finger from the end of the nose to some portion of the arc of a circle of which he is the center and whose plane is at the level of his elbow. The whole arrangement consists of a location apparatus, error index, pendulum chronoscope, pendulum and index clamp, release, etc.[1]

Three positions, A, B, and C, fig. 8, are selected, so as to give a wide range of movement. The object to be touched is a white spot half an inch in diameter placed at one of the points without the knowledge of the subject. There is a screen in front, which can be arranged to fall so as instantly to disclose the spot. There is a pendulum chronoscope (fig. 9) in connection with this, which measures the interval of time between the falling of the screen and the touching of the white spot. The

[1] For complete description, see Psychological Review, January, 1895.

error of the movement and its direction is determined by the apparatus for that purpose.

The chronoscope (fig. 9) has a balanced pendulum, total length of which is 12 inches, and so weighted that the time of swing is about a second and a half. The pendulum carries a small index that may be clamped instantly in any position on the scale, which is graduated in hundredths of a second by a falling weight. The pendulum is held in preparatory position by means of a hook connected with the

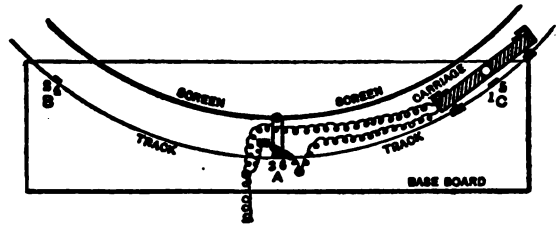

FIG. 8.—Location apparatus. (Fitz.)

armature of an electromagnet. When the screen falls the circuit is broken and the pendulum carrying its index is released. The remaking of the circuit by the touch of the subject's finger releases a clamp and catches the index, so that the time may be read upon the scale. Professor Fitz measured some of the elements making up the differences which exist between individuals in their power to do certain

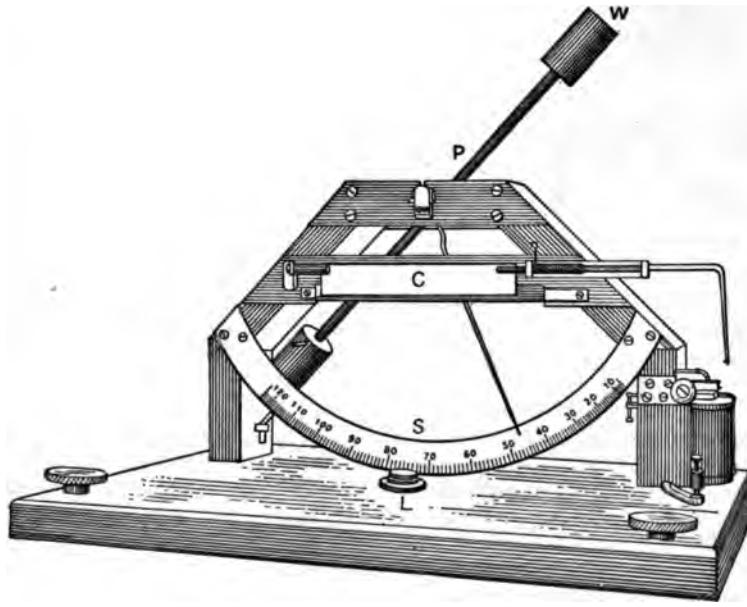

FIG. 9.—Pendulum chronoscope (Fitz.)

things requiring quickness and accuracy. The differences were found to be quite considerable, and there was an apparent lack of coordination between time and error. Those who were quick were not necessarily less accurate than those who were slow. The table which follows gives results suggesting the wide range of individual ability.

TABLE 1.—*Differences in individuals in quickness and accuracy.*

Time in $\frac{1}{10}$ seconds.	Males.			Females.		
	Number of individuals.	Per cent of total.	Average error.	Number of individuals.	Per cent of total.	Average error.
27- 35	11	6.2	11.1	1	1.5	10.0
35- 45	48	22.5	10.05	12	18.0	9.4
45- 55	54	31.0	8.25	18	26.0	7.8
55- 65	29	17.0	9.0	25	35.0	7.2
65- 75	18	11.0	8.2	11	16.0	5.4
75- 85	8	5.0	3.1	4	5.0	4.4
85- 95	4	2.0	4.05	0	.....	.....
95-105	0	0.0	0.0	.....	.....	.....
105-115	1	6.0	7.8	.....	.....	.....

The table contains observations on 173 males and 72 females. The first column gives limits of quickness, the second column number of individuals, etc. Though the time of the women is longer than that of the men, there is a compensatory increase in accuracy. It may be that everyday activity determines for each individual his range of error, and that time is the main element of variation. (Fitz.)

TIME MARKERS.

The form of time markers (fig. 10) below can be used in connection with an electrically maintained tuning fork of slow vibration. A small electro-magnet moves a lever carrying a writing point A, which marks on the surface of the paper of a recording instrument. It may also be connected with a clock, and used to analyze

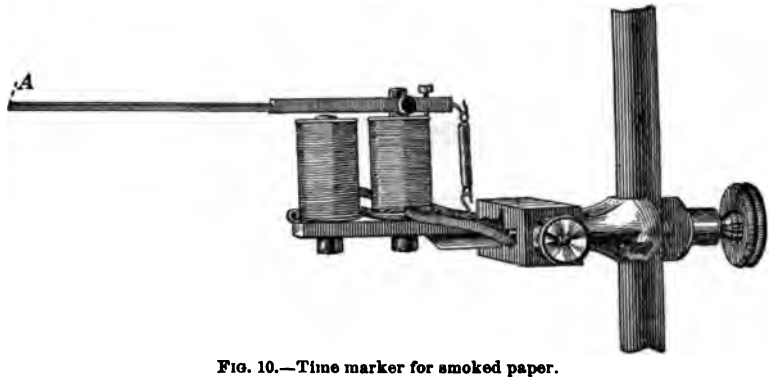

FIG. 10.—Time marker for smoked paper.

any other curve drawn at the same time by another instrument. Another form of the time marker writes with ink on continuous paper. Maker, Cambridge Scientific Instrument Company, England.

The Deprez signal or time marker, represented in fig. 11, has very small electro-magnets, and the parts are very light. When connected with a tuning fork interrupting the current 200 or more times a second, it will give a good tracing. Maker, Cambridge Scientific Instrument Company, England.

MAREY'S TAMBOUR.

This is the original pattern of Marey's tambour (fig. 12). The tambour slides up and down a rod R, fastened to a small firm iron stand. An india-rubber membrane, B, is tied over the shallow brass vessel *V*, making an air-tight inclosure. An aluminum plate is fastened to the center of the membrane and is attached to the rod *A*, which writes. This rod can be adjusted in its connection with the brass disk so as to allow

its multiplication to be changed. The fulcrum of this rod or lever can be placed horizontally. The principle of the tambour is to record movements which are transmitted to it by means of a tube filled with air. On the iron tube *D* can be fastened a rubber tube conveying the movements of the air to the tambour. When the pressure of the air increases, the rod or marker *A* rises; when the pressure is less, the rod falls. The increase or decrease of pressure is caused by another instrument with which the experiment is being made. Maker, Cambridge Scientific Instrument Company, England.

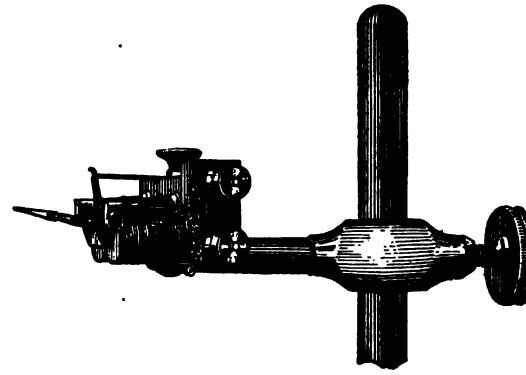

FIG. 11.—Deprez signal.

The figure below (fig. 13) represents Marey's tambour, after the Cambridge pattern. This tambour is made of a thin piece of ebonite. The india-rubber membrane *C* is held between the brass plate *B* and the ebonite *D*. The membrane *C* can be easily replaced by taking off the brass plate *B*, which is screwed on. The rod *E*, which consists of a thin piece of cane, is slipped into a slit in a small block of ebonite *F*, which rests directly on the membrane. A thin piece of brass *H* is put

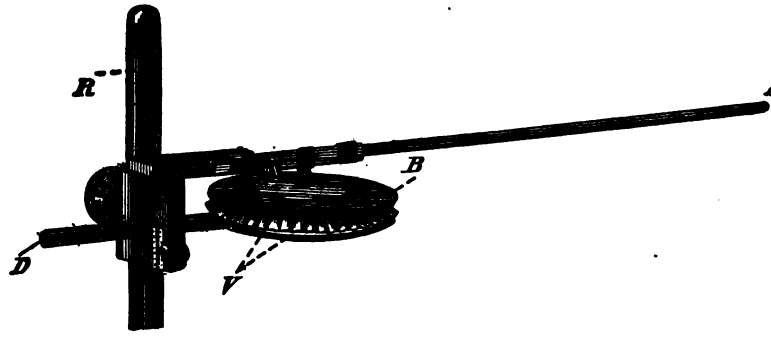

FIG. 12.—Marey's tambour.

into another slit in the ebonite block *F*, and serves as an axis for the rod or marker *E*. *A* is the brass tube on which a rubber tube is drawn conveying the waves of air to the membrane *C*. Maker, Cambridge Scientific Instrument Company, England

GRAPHIC REGULATOR.

The graphic regulator of Binet & Courtier is designed to eliminate errors from tracings by suppressing oscillations due to the inertia of the marker or pen. In fig. 14 the different parts of the apparatus are represented in their natural size. The maker is Otto Lund, Place de la Sorbonne, Paris.

THE MYOGRAPH.

The myograph is an instrument which shows the differences between muscles in strength, and in the duration and phases of their movements. As the most of life's functions are made known through movements, and as the cause of each movement is generally a muscle, the importance of a knowledge of muscular functions is evident.

The myograph of Marey, in fig. 15, consists of a sort of bracelet made of small strips of wood fastened together by a cord which passes through holes in each end of the strips of wood. On the under surface of this bracelet is a rod with a plate on

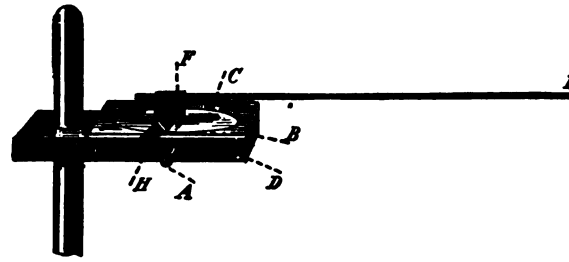

FIG. 13.—Marey's tambour, Cambridge pattern.

the end of it to insert against the muscle. This rod is connected with a brass vessel, A, which has a rubber membrane over it, making it air-tight, and in this way the movements of the muscle are transmitted through the air tube D to a tambour, and thus recorded on a revolving cylinder. The electrical excitation of the muscle comes through the two wires, *b* and *f*. The maker is Verdin, of Paris.

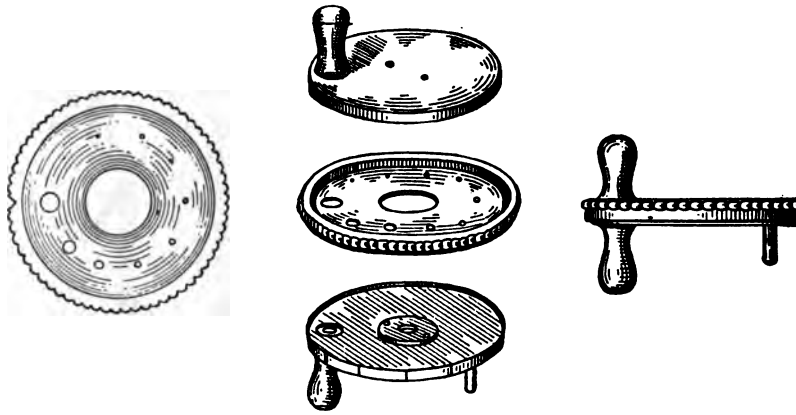

Fig. 14.—Graphic regulator. (Binet & Courtier.)

APPARATUS FOR MUSCULAR SENSE.

The apparatus (fig. 16) for muscular sense is the invention of Professor Münsterberg, of Harvard University. A strong iron rod, C, a little over an inch in diameter, is supported by a heavy iron stand *a* into which the rod C moves up and down, being held at will by the screw *b*. At the end of the rod C is an iron frame which turns upon an axis. This frame has on it two small rails upon which runs lightly a car, *h*, with four small brass wheels. The car is held upon the track at any desired position by a piece of metal, which has upon the end a small wheel running along the under side of a third rail, midway between and a little above the other two rails. An indicator is attached to the car, showing its position upon the scale, which is 900 millimeters long. To the top of the car is attached a short, hollow brass cylinder, *l*, into which the end of the index finger can be inserted and the car

set in motion. The limits to the motion of the car can be fixed by two clamps, *m*.

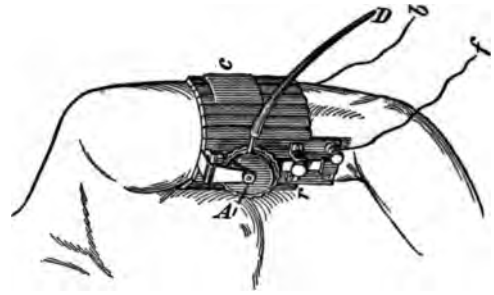

FIG. 15.—Marey's myograph.

and *m'*. There are two pulleys, *n* and *n'*, one at each end of the middle track. A string is drawn over these two pulley wheels and is fastened at one end to the little car and at the other end to a scale pan, *s*, so that the weight of the car can be compensated for or the movement of the car made more difficult or easier. Maker, Elbs, of Freiburg, Germany.

In a series of experiments with this instrument Professor Delabarre, of Brown University, determined, among others, the following points:[1]

1. Those distances are considered equal, the sensible elements of which are considered equal.

2. Therefore everything which unconsciously increases the sensible elements or the strength of the sensations, causes distances to be overestimated, so that a short distance will be felt to be equal to a longer distance.

3. When the person experimented upon is conscious of these causes, which make him overestimate distance, he strives to correct the error. This correction can easily be too great, so that he falls into an opposite error of underestimating the distances on the rails of the instrument.

4. These principles hold for similar movements, whether they occur in succession or at the same time. When they occur in succession another factor must be considered—that is, error in time; for a distance seems longer in memory than when we execute it, providing, of course, any other disturbing factors are eliminated.

FIG. 16.—Apparatus for muscular sense. (Münsterberg.)

THE PLETHYSMOGRAPH.

This instrument is used to measure the variations in the volume of an organ. One principle upon which this is done is to place the organ in water in an air-tight cylinder and measure the amount of water displaced. Archimedes was the inventor of this method. The apparatus above (fig. 17) is to measure changes in the volume of the hand, a model of François Franck. If to the tube A is fastened a rubber tube, connecting with a tambour, it is evident that when the volume of the hand increases, the surface of the water at B will rise and increase the pressure of the air against the

[1] *Delabarre, E. B.*, Ueber Bewegungsempfindungen, Freiburg, 1891.

membrane of the tambour, making its lever rise, giving an upward curve on a recording instrument. Maker, Verdin, of Paris.

A drawing is given (fig. 18) showing the newest form of Mosso's plethysmograph. This is constructed somewhat on the principle of the instrument (fig. 17) just mentioned.

Mosso's plethysmograph consists of a long glass vessel A. The opening through which the arm is introduced is closed with caoutchouc, and the vessel is filled with water. A complete description of this apparatus would go further than is the purpose of this chapter, which is to give the plan and general idea of the form and application of instruments. But it may be said in regard to the rest of the apparatus employed to convey the results of the variations in the volume of the arm, that it is so adjusted that any increase or decrease in the volume of the arm, and consequently in the pressure of the water, causes the weight H, on which is a marker K, to rise or fall, giving an upward or downward curve on a revolving cylinder.

This instrument has served particularly to determine the amount of blood in the arm. It can be applied to other researches in physiology. By making the glass tube N small, one can see in the tracings of the marker K the pulsations of the heart, the respiratory oscillations, and the undulations of the vessels depending on the vasomotor center.

FIG. 17.—Plethysmograph. (Franck.)

In experiments on the action of medicaments in sleep, etc., where it is necessary to measure greater changes of volume in the arm, a larger tube N is used. Maker, Verdin, Paris.

THE PNEUMOGRAPH.

Knowledge as to the movements of the chest in respiration is considered of great importance. The instrument that records these movements is the pneumograph. The one in fig. 19 is after Marey's model. It consists of a flexible brass plate A A, on which are fastened two levers, B and B. The plate A A is placed against the walls of the chest; it is suspended from the neck by cords fastened at D, and it is held against the chest by a cord passing around the body and fastened to both levers B B. A tambour C is so connected with the brass plate A A that any movement of the chest causes the tambour to expand or the reverse, and this movement is carried through the air tube E to a tambour recording upon a cylinder.

Thus, fig. 20 gives a curve of normal respiration, where the rising of the curve traced by a tambour represents inspiration and the falling expiration. Types of respiration may be studied and the effects of disease on movements of the chest shown.

In studying the influence of intellectual and emotional states upon the respiratory movements, the writer, in a series of experiments, found in general that concentration of thought, as in mathematical calculations or in reading, lessens the respiratory movements considerably.

A most recent form of the pneumograph is given in figure 21. It is constructed of aluminum. It is held up partly by a cord around the neck. The instrument consists of a plate A, with two movable basins B B, each covered with a rubber membrane, making the inclosure air-tight. A cord around the body is fastened to a hook in each of the membranes. Two rubber tubes from the membrane join at D, where they can be connected with a tambour, for recording the expansion or contraction of the chest. Maker, Verdin, Paris.

APPRECIATION OF WEIGHT.[1]

The instrument consists of a box containing ten trays which can be easily removed. Each tray contains three weights, identical in size and appearance, but differing in

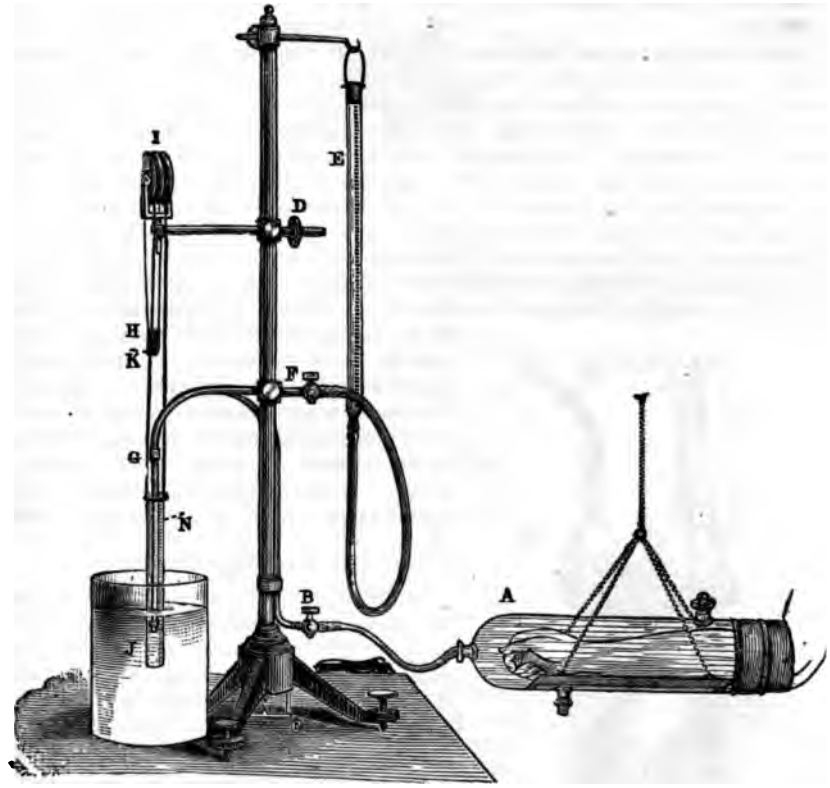

FIG. 18.—Plethysmograph. (Mosso.)

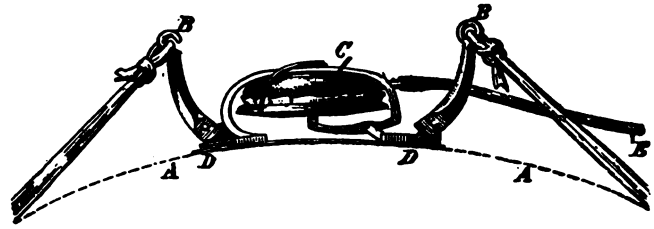

FIG. 19.—Pneumograph. (Marey.)

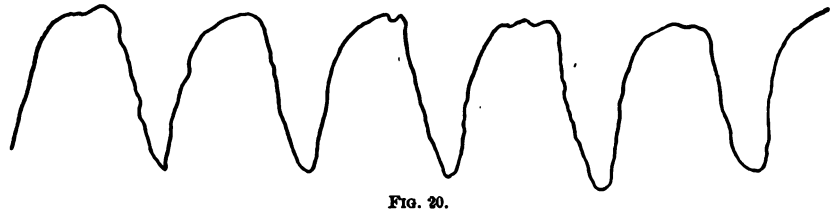

FIG. 20.

[1] See "On apparatus for testing the delicacy of muscular and other senses in different persons," by Francis Galton, F. R. S., Journal of the Anthropological Institute, *May*, 1883.

weight from each other. The three weights in each tray form a series of gradually increasing weights in geometrical progression and the series in each tray differ in value.

It follows from Weber's law that if a person can just appreciate the differences between two consecutive weights in one tray he can then also just appreciate the

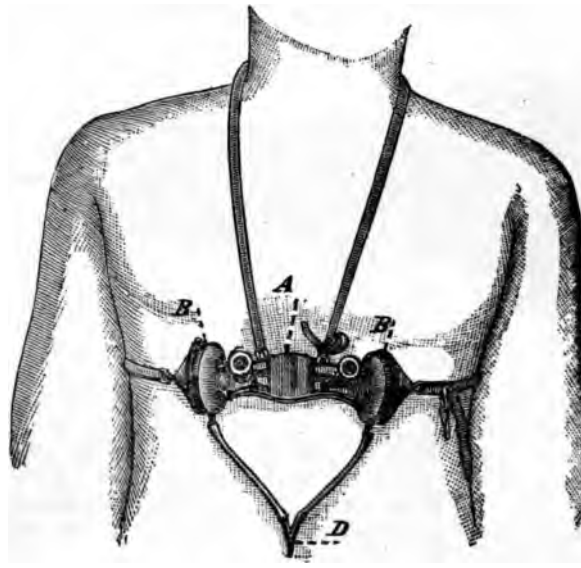

FIG. 21.—Pneumograph. (Verdin.)

difference between the other consecutive pair in that tray. The following are the values of the weights in each tray, where $W=1{,}000$ grains and of $r=1.01$:

Weights contained in tray—

No. 2	Wr^0,	Wr^2,	Wr^4
No. 3	Wr^4,	Wr^7,	Wr^{10}
No. 4	Wr^7,	Wr^{10},	Wr^{14}
No. 5	Wr^4,	Wr^9,	Wr^{14}
No. 6	Wr^0,	Wr^6,	Wr^{12}
No. 7	Wr^0,	Wr^7,	Wr^{14}
No. 8	Wr^8,	Wr^{10},	Wr^{12}
No. 9	Wr^0,	Wr^9,	Wr^{18}
No. 10	Wr^4,	Wr^{14},	Wr^{24}
No. 12	Wr^0,	Wr^{12},	Wr^{24}

Each weight has engraved in an inconspicuous manner the index of the power of r: thus in tray No. 2 the weights have the numbers 0, 2, 4, and in tray No. 3 they have 4, 7, 10. Thus the number of each tray is the difference of the powers of r in two consecutive weights in that tray. Maker, Cambridge Scientific Instrument Company, England.

MEASUREMENT OF PRESSURE—BARÆSTHESIOMETER.

The baræsthesiometer (fig. 22), designed by Professor Eulenburg, of Berlin, is constructed on the principle of a spiral-spring balance. A small knob A is pressed upon the skin gradually. One method is to press until the marker B reaches, say, 50 grams, then the subject closes his eyes and the experimenter gradually increases the pressure. The subject is to indicate as soon as he feels the additional pressure,

thus giving his least sensibility to the increase of pressure. The amount is recorded by the hand B. Maker, Hirschmann, Berlin.

BARO-ELECTRO-ÆSTHESIOMETER.

The baro-electro-æsthesiometer, as its name indicates, measures, the amount of pressure at the time electrical sensilility to tingling or pain is felt.

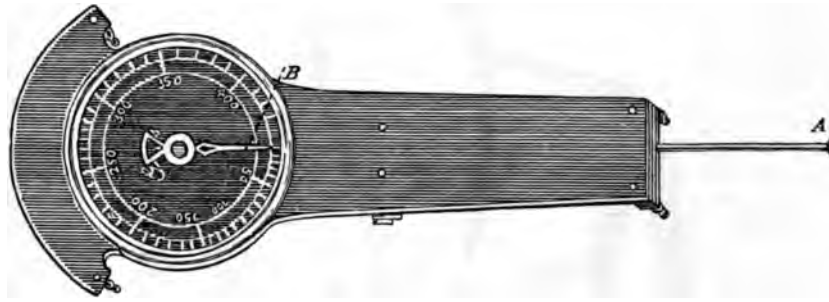

FIG. 22.—Baræsthesiometer. (Eulenburg.)

The instrument (fig. 23) is Eulenburg's baræsthesiometer, with such additions by the author as to make it serve for an electrode. Two round steel knobs can be screwed on to the end of rod A; one is 20 millimeters, the other 35 millimeters in diameter. At B is fastened a short rod, with a hole and screw, by which a wire can be held, which connects with the battery. An indifferent electrode is fastened, say, to the back of the head. We will suppose it is desired to find the strength of cur-

FIG. 23.—*Baro-electro-æsthesiometer.* (Eulenburg and MacDonald.)

rent passing through the cranium and brain. The instrument is pressed against the forehead. The advantage is that the amount of pressure is known and can be kept constant, whereas with the ordinary electrode the amount of pressure is unknown and is liable to vary, so that in comparing two persons the difference in the strength of the current required to make them feel it may be influenced by the amount of pressure, rather than by the real difference in their electrical sensibility.

FIG. 24.—Temple algometer. (MacDonald.)

THE MEASUREMENT OF PAIN.

Pain is caused by applying to a sensory nerve a greater stimulation than is normal. The stimulation may be mechanical, electrical, thermal, etc. The measurement of pain can only be approximated, and here there is often difficulty.

The writer has designed a new instrument (fig. 24,) which may be called a temporal or temple algometer.

It measures sensibility to painful or disagreeable impressions caused by pressure, and is generally applied to the temporal muscles. The instrument consists of a brass cylinder B F, with a steel rod C running through one of its ends; this rod is attached to a spring, with a marker E on the scale, measuring pressure from 0 to 4,000 grams.[1] The brass disk D is 15 millimeters in diameter; a piece of flannel is glued to its surface so as to exclude the feeling of the steel when pressed against the skin, thus giving a pure-pressure sensation. The whole instrument is 30 centimeters in length.

In using this algometer it is held in the right hand, as represented in fig. 25, by the experimenter, who stands back of the subject and presses the disk D against the right temporal muscle; then he moves in front of the subject, where he can conveniently press the disk D against the left temporal muscle. As soon as the subject feels the pressure to be the least disagreeable, the amount of pressure is read from the scale A (fig. 24), as indicated by the marker E. The subject sometimes hesitates to say just when the pressure becomes the least disagreeable, but this is part of the experiment. The idea is to approximate as near as possible to the threshold of pain. Maker, Verdin, Paris.

In making experiments upon both sexes the author has found women to be more acute in sensitiveness of disagreeableness or pain from pressure than men.

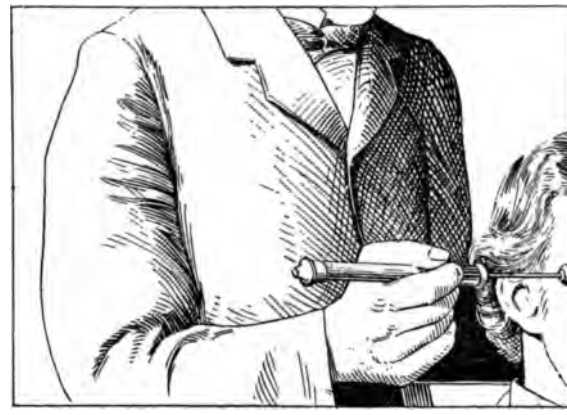

FIG. 25.

In the three following tables (2, 2*a*, 2*b*) are given recent measurements of pain by Misses F. Alice Kellor, Emily Dunning, Alice O. Moore, and Alice E. Palmer. These measurements were made with the author's temple algometer under his direction. Four distinct classes are represented in the tables: University women students, washerwomen, business women, as clerks and stenographers, and young women of the wealthy classes.

The young women of the wealthy classes (Table 2*b*) are, according to the measurements, very much more sensitive to pain than any of the other classes. The university women are more sensitive to pain than the washerwomen (Tables 2, 2*a*). The business women are, however, more sensitive than the university women. As is well known, the majority of university students, both men and women, are not wealthy, but simply in moderate circumstances. It seems that the sociological condition is one of the main factors to affect sensibility to pain.

[1] In experiments upon criminals a pressure of 4,000 grams would in some cases not feel the least disagreeable. A larger form of the instrument is being constructed, so as to measure 8,000 grams pressure.

TABLE 2.—*Measurements (in grams) of the least sensibility to pain in university women students, with temple algometer.*

[By F. Alice Kellor and Emily Dunning, of Cornell University.]

Age.	Right temple.	Left temple.	Age.	Right temple.	Left temple.
17 years	1,725	1,925	21 years	1,550	1,350
17 years	1,550	1,150	21 years	2,450	1,550
			21 years	3,225	2,750
Total	3,275	3,075	21 years	1,650	1,450
Average	1,637	1,537	Total	8,875	7,100
			Average	2,218	1,775
19 years	2,000	1,750			
19 years	2,450	1,950	22 years	2,725	2,400
19 years	2,900	2,550	23 years	2,200	2,400
19 years	2,550	2,700	23 years	1,600	1,350
19 years	2,825	3,000			
19 years	3,900	4,000	Total	6,525	6,150
19 years	2,450	2,950	Average	2,175	2,050
19 years	1,450	1,950			
			25 years	2,650	1,925
Total	20,525	20,850			
Average	2,565	2,606	27 years	2,500	2,350
			27 years	1,850	1,600
20 years	2,325	2,125	Total	4,350	3,950
20 years	3,400	2,200	Average	2,175	1,975
20 years	2,800	2,100			
20 years	1,600	1,450	28 years	2,150	2,625
20 years	1,350	1,900	28 years	1,550	2,100
20 years	2,925	1,950	29 years	1,700	1,100
20 years	2,325	2,960	32 years	1,650	2,150
20 years	1,750	2,425			
20 years	1,550	1,750	Total	7,050	7,975
			Average	1,762	1,993
Total	20,025	17,900			
Average	2,225	1,988	Average of all	2,220	2,088

TABLE 2*a*.—*Measurements (in grams) of the least sensibility to pain in washerwomen and business women, with temple algometer.*

[By Alice O. Moore, of the Charity Organization Society, of Buffalo, N. Y.]

Age.	Right temple.	Left temple.	Age.	Right temple.	Left temple.
WASHERWOMEN. *a*			BUSINESS WOMEN (CLERKS, STENOGRAPHERS, ETC.). *b*		
25 years	2,750	2,950			
31 years	4,500	4,500	30 years	1,500	1,000
31 years	3,500	4,000	31 years	1,400	1,300
32 years	2,150	1,900	35 years	1,100	1,150
35 years	4,000	4,000	38 years	1,100	1,450
36 years	2,300	2,050	40 years	1,200	1,450
37 years	2,700	2,800	45 years	1,650	1,350
39 years	3,134	3,400	60 years	1,650	1,600
40 years	3,900	3,750	60 years	1,000	850
41 years	2,900	3,000	60 years	2,050	2,000
42 years	3,450	3,250			
45 years	2,950	2,600	Total	12,650	12,150
49 years	2,250	2,850	Average	1,405	1,350
55 years	2,550	2,250			
			Average of all	2,421	2,410
Total	43,034	43,300			
Average	3,073	3,092			

a Average age, 38 years.

b Average age, 44 years.

TABLE 2b.—*Measurements (in grams) of the least sensibility to pain in young women of the well-to-do classes, with temple algometer.*

[By Alice E. Palmer, teacher of mathematics, Pittsburg, Pa.]

Age.	Right temple.	Left temple.	Age.	Right temple.	Left temple.
12.8 years	700	650	16.2 years	1,000	1,100
12.9 years	750	600	16.3 years	1,000	1,000
12.10 years	650	800	16.3 years	900	1,100
12.11 years	800	850	16.3 years	650	700
			16.8 years	950	1,100
Total	2,900	2,900	16.9 years	1,100	950
Average	725	725	16.9 years	900	950
			16.9 years	1,000	1,050
13.2 years	1,150	1,200			
13.4 years	600	600	Total	7,500	7,950
13.6 years	750	750	Average	937	993
Total	2,500	2,550	17.1 years	750	850
Average	833	850	17.1 years	1,750	1,550
			17.2 years	700	650
14 years	1,600	1,550	17.2 years	1,500	2,000
14.4 years	950	950	17.4 years	1,200	1,150
14.6 years	700	700	17.7 years	1,300	1,350
14.7 years	1,000	950	17.9 years	1,700	1,600
			17.9 years	1,050	1,000
Total	4,250	4,150	17.10 years	600	650
Average	1,062	1,037			
			Total	10,550	10,800
15.1 years	950	950	Average	1,172	1,200
15.2 years	600	550			
15.2 years	1,700	1,550	18 years	850	950
15.3 years	700	650	18.2 years	600	600
15.4 years	1,450	1,500	18.4 years	2,000	1,600
15.5 years	950	1,050	18.8 years	1,050	950
15.5 years	750	800			
15.6 years	850	900	Total	4,500	4,100
15.6 years	600	650	Average	1,125	1,025
15.6 years	950	950			
15.7 years	1,350	1,400	19.1 years	800	850
15.9 years	750	850	19.2 years	850	900
15.9 years	600	800			
15.9 years	1,650	1,650	Total	1,650	1,750
			Average	825	875
Total	13,850	14,250			
Average	989	1,017			

ÆSTHESIOMETER.

The æsthesiometer measures the degree of ability to distinguish points on the skin by the sense of touch. This is called the sense of locality, which varies in acuteness according to the mobility of the part.

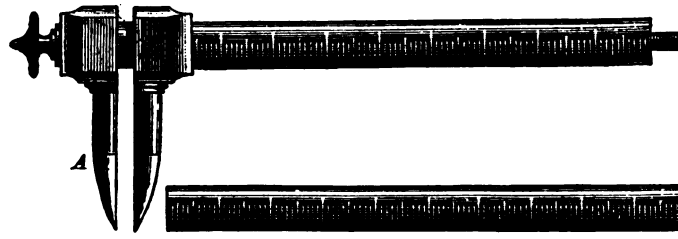

FIG. 26.—Æsthesiometer.

The instrument (fig. 26) consists of a round brass rod on which is a scale. One point A is fastened on the rod, the other point slides on the rod. The subject, with eyes closed, is asked, when the two points are made to gently touch the skin simultaneously, how many points he feels, one or two. When he is in doubt the distance between the two points can be read on the scale. This distance is an approximate measure of his sense of locality on the skin. Maker, Verdin, Paris.

The following table gives the the smallest distance (in millimeters) at which two points can still be distinguished as double by an adult and by a boy 12 years of age:

TABLE 3.

[Physiology, Landois and Sterling, Philadelphia, Pa.]

	Adult.	Boy 12 years old.		Adult.	Boy 12 years old.
Tip of tongue	1.1	1.1	Center of hard palate	13.5	11.3
Third phalanx of finger, volar surface	2-2.3	1.7	Lower third of forearm, volar surface	15.0	.....
Red part of the lips	4.5	3.9	In front of the zygoma	15.8	11.3
Second phalanx of finger, volar surface	4-4.5	3.9	Plantar surface of great toe	15.8	9.0
Third phalanx of finger, dorsal surface	6.8	4.5	Inner surface of the lips	20.3	13.5
Tip of nose	6.8	4.5	Behind the zygoma	22.6	15.8
Head of metacarpal bone, volar surface	5-6.8	4.5	Forehead	22.6	18.0
Dorsum and side of tongue, white of the lips, metacarpal part of the thumb	9.0	6.8	Occiput	27.1	22.6
Third phalanx of great toe, plantar surface	11.3	6.8	Back of the hand	31.6	22.6
Second phalanx of fingers, dorsal surface	11.3	9.0	Under the chin	33.8	22.6
Back	11.3	9.0	Vertex	33.8	22.6
Eyelid	11.3	9.0	Knee	36.1	31.6
			Sacrum, gluteal region	44.6	33.8
			Forearm and leg	45.1	33.8
			Neck	54.1	36.1
			Upper arm, thigh, and center of the back	67.7	31.6-40.6

THERMÆSTHESIOMETER.

The thermæsthesiometer (fig. 27), designed by Professor Eulenburg, of Berlin, measures the least sensibility to heat. It consists of two thermometers fastened

FIG. 27.—Thermæsthesiometer. (Eulenburg.)

together as seen in the figure. There is an electrical arrangement for changing the temperature of one of the thermometers. One thermometer is heated until the

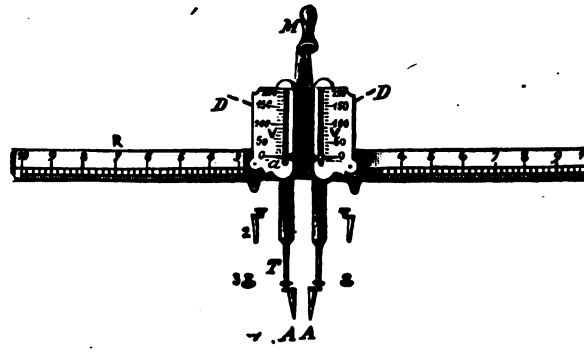

FIG. 28.—Dynamometrical æsthesiometer. (Verdin.)

FIG. 29.—Algometer. (Chéron.)

difference from the other is easily perceived; then both are placed upon the skin. The person to be experimented upon is asked to say as soon as the difference between the thermometers becomes imperceptible. The real difference between the thermometers is then read; this is called the least perceptible difference. If for one person this difference is 2° and for another person 3°, then the former is said to be more acute in sensibility to heat by 1°; for small differences are less easily perceived than large differences.

The maker of the form of instrument represented in the figure (27) is Windler, Berlin.

DYNAMOMETRICAL ÆSTHESIOMETER.

In fig. 28, below, is represented a dynamometrical æsthesiometer designed by Charles Verdin. It measures the different degrees of the sensibility to pain by pressure of two points AA, on the skin.

It is composed of a flat steel bar R marked off in centimeters, on the back of which is fastened a handle M. The two scales DD, which measure the amount of pressure of the points AA, are graduated from 0 to 250 grams. They are fastened to the rods with the points at the end and slide along the bar R, so that the points may be at different distances from each other. Maker, Verdin, Paris.

Another algometer (fig. 29) is that of Dr. Chéron. Its purpose is not only to measure how much pressure of the point A on the skin is necessary to produce pain, but also how much the point A penetrates the skin. The amount of pressure is measured on the scale D; the distance the point enters the skin is measured in tenths of millimeters on the circular scale C. A brass tube, B, slides up and down the rod R. This tube is slid down so that its edge, E, is even with the point, A, and is connected by a thin rod, R, with the scale, C, so as to measure the amount of the sinking of the point, A, into the skin as soon as pain is felt. Maker, Verdin, Paris.

HAND ALGOMETER.

The hand algometer in fig. 30 is a design by Professor Cattell, of Columbia University, New York. The body of the instrument is made of gutta-percha. The brass rod A, with a rounded gutta-percha tip at one end, is connected with a spring within the body of the instrument; the scale is in kilograms. The instrument is pressed

FIG. 30.—Algometer. (Cattell.)

against the palm or other part of the hand, and as soon as the pressure becomes the least painful the amount the pointer indicates on the scale is recorded. Makers, Brown & Getty, Camden, New Jersey. The author has used Cattell's instrument upon 188 persons, testing the palm of both hands for pain, with the results as indicated in Table 4, which follows:

TABLE 4.—*Sensibility to pain by pressure in hands of individuals of different classes, sexes, and nationalities.*[1]

No.	Class.	Total number of persons.	Right hand.			Left hand.		
			Number requiring more pressure in right hand.	Total.	Average.	Number requiring more pressure in left hand.	Total.	Average.
1	2	3	4	5	6	7	8	9
				Kgm.	*Kgm.*			
1	American professional men	20	14	74.50	3.72	5	65.25	3.26
2	American business men	14	6	85.25	6.08	6	87.75	6.05
3	American women, nonlaboring class	27	13	93.25	3.45	6	91.83	3.38
4	English professional men	17	9	88.50	5.20	6	87.25	5.13
5	English women, nonlaboring class	7	4	43.00	6.14	2	44.25	6.32
6	German professional men	6	5	31.25	5.20	1	29.00	4.83
7	Salvation Army members, London	8	6	73.25	9.15	2	51.00	7.62
8	Slum men in Chapel-Rouge, Paris	9	3	122.50	13.61	2	119.50	13.27
9	Boston army of the unemployed	34	16	332.50	9.77	14	333.75	9.81
10	Women in "Maisons de Tolérance," Paris	9	3	82.00	9.00	5	84.25	9.36
11	Epileptic patients, laboring people	3	1	28.00	9.33	1	27.00	9.00
12	Odd ones, men, in Paris	7	4	28.25	4.63	3	26.25	3.75
13	Odd ones, men, in different countries	18	10	96.25	5.34	5	89.50	4.97
14	Men in general	142	76	1,012.75	7.13	49	979.50	6.89
15	Women in general	46	21	230.50	5.01	15	233.06	5.06

Should these results prove to be generally true by experiments on larger numbers of people, the following statements would be probable:

The majority of people are more sensitive to pain in their left hand. (Only exception is No. 10, columns 4 and 7.)

Women are more sensitive to pain than men. (Nos. 14 and 15, columns 6 and 9.) Exceptions are: compare Nos. 4 and 5, columns 6 and 9. It does not necessarily follow that women can not endure more pain than men.

American professional men are more sensitive to pain than American business men (compare Nos. 1 and 2, columns 6 and 9); and also than English or German professional men. (Compare Nos. 1, 4, and 6, columns 6 and 9.)

The laboring classes are much less sensitive to pain than the nonlaboring classes. (Compare Nos. 1, 2, and 9, columns 6 and 9.)

The women of the lower classes are much less sensitive to pain than those of the higher classes. (Compare Nos. 3, 5, and 10, columns 6 and 9.) In general, the more developed the nervous system the more sensitive it is to pain.

Remark: While the thickness of tissue on the hand has some influence, it has by no means so much as one might suppose, a priori; for many with thin hands require much pressure. (Nos. 5 and 10, columns 6 and 9.)

MUSCLE READING.

Some explanation of muscle reading and like phenomena may be suggested by experiments with the digitalgraph[2] (fig. 31) and the automatograph (fig. 32).

Figure 31 represents an instrument for recording the unconscious movements of the finger, designed by Dr. Delabarre, of Brown University. The movements of the finger are communicated by two chords, A and B, to two rods, V and H, on which can be fastened markers to make tracings upon a revolving cylinder. The rods V

[1] Psychological Review, March, 1895.

[2] We have ventured to name this instrument.

and H are held in a state of tension by rubber bands, which react in such a way as to cause every horizontal or vertical movement of the finger to be recorded. Maker, Verdin, Paris.

THE AUTOMATOGRAPH.

The automatograph (fig. 32) below, designed by Professor Jastrow of the University of Wisconsin, is an instrument for the study of involuntary movements. It

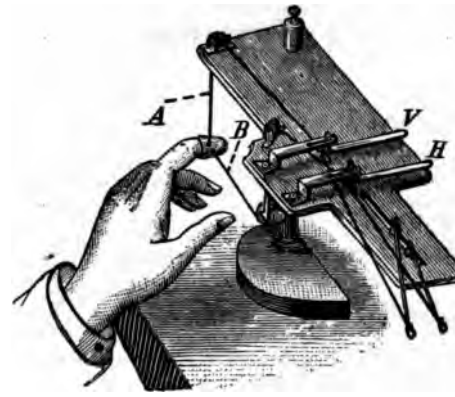

FIG. 31.—Digitalgraph. (Delabarre.)

consists of a wooden frame, B, mounted on three adjustable brass legs, raising it from the table a little, and enabling one to make the plate glass E (15 inches square) exactly level. Three glass balls and polished spheres, three-fourths of an inch in diameter, are placed in triangular form upon the plate glass; a very light crystal plate glass (14 inches square) rests upon these balls. This crystal plate is mounted in a light frame. A piece of paper is placed upon the plate to hide the balls; the ends of the fingers are lightly rested upon this paper. The least movement of the hand

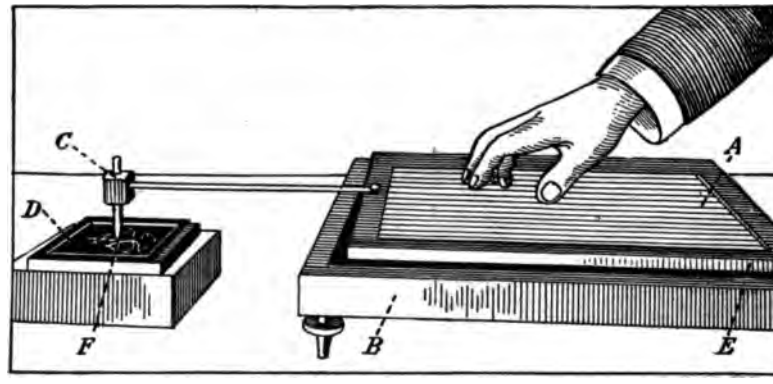

FIG. 32.—Automatograph. (Jastrow.)

slides the upper plate upon the balls. To the light frame of the upper plate A is fastened a small rod 10 inches long, upon the end of which is a cork, C, pierced by a small glass tube. In this tube is a glass rod fitting the tube snugly. The fine point to this rod traces every movement of the hand exactly. A piece of smoked paper, D, is placed over a glass plate to receive the markings of the rod or pointer F. A large screen is used to prevent the subject from seeing the record. The instrument records all movements in the horizontal plane. Jastrow calls it an automatograph, because

it records slight involuntary movements. The results of experiments by Jastrow[1] show that the meaning of the movements recorded depends mostly upon the testimony of the subjects. In general the subject becomes aware his hand has moved, but seldom knows the direction; the movements, though always involuntary, are sometimes unconscious. The subject is often surprised at the result. This and the digitalgraph of Delabarre suggest many subtle ways[2] in which by movement we unwittingly give others an idea of what is going on in our minds. Jastrow intentionally simulated these movements and the result was measurably different from the genuine involuntary movements.

Details as to instrument may be obtained from the inventor.

TREMBLING OF THE TONGUE AND HAND.

In fig. 33 is an instrument designed to measure the trembling of the tongue. It consists of a brass frame B, fastened to the mouth by a braid around the head. The tongue is held against a little disk attached to a tambour C with a brass tube A that can be connected with a recording tambour. The instrument measures rather the control of the will over the movements of the tongue. Maker, Verdin, Paris.

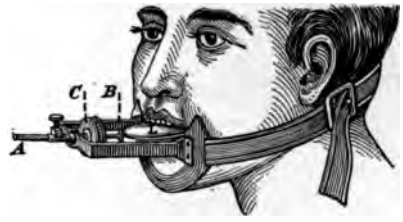

FIG. 33.—Instrument for measuring the trembling of the tongue.

In order to measure the trembling or movement of the hand or arm the instrument in fig. 34 has been devised. It consists of a rubber membrane M, fastened to a small shallow brass basin C, making a tambour. A brass disk D is glued to the membrane M, and on this disk is a brass rod T. Different weights of 5, 10, etc., grams can be screwed upon the rod T. A brass tube passes through the handle, on the end of which can be fastened a rubber tube K, connecting with a recording tambour. Any movement of the hand or arm up and down causes the weight to press upon the membrane M, which sends a wave of air to the recording tambour. Maker, Verdin, Paris.

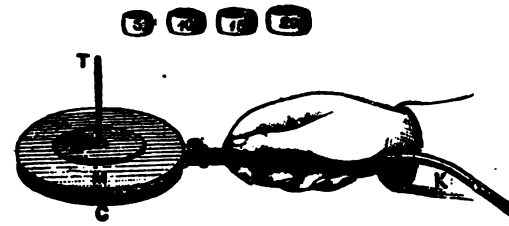

FIG. 34.—Instrument to measure the trembling of the hand and arm.

Figure 35 is a combination of instruments to record the movements of tongue, finger, lips, etc. The apparatus comprises a cylinder E, recording tambour A, connected with another tambour D. A light rod T is connected with this second tambour D. At the end of this rod, at K, is tied a small cord, running on a pulley P, which is fastened to a small brass rod F; this rod slides up and down freely in a brass tube. The purpose of this is to obtain a state of equal tension of the cord for all experiments, by having the cord hold the pulley, the weight of which is constant As soon as the tension is obtained a button N is pressed and the pulley is held firm, suppressing weight of pulley and cord. Then the trembling of the member is recorded. Maker, Verdin, Paris.

THE PSYCHOGRAPH.

The psychograph is a new apparatus for the study of trembling. The instrument in fig. 36 was designed by Professor Sommer, of Giessen, Germany, and is used for the investigation of the unconscious movements of the hand.

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[1] Amer. Jour. Psychology, Vol. IV, 1892, page 398.

[2] As when a company of people place their hands upon a table, and it moves, although none are conscious of pushing it.

There are two special difficulties in studying the trembling of the hand. One is to analyze the movements and distinguish them—that is, each movement in three directions, horizontal from right to left, and forward and backward, and vertical up and down. It is necessary also to lessen friction as much as possible, for recording the slightest movement of the hand. This latter difficulty is overcome by employing systems of levers, reducing the friction to a minimum. It is necessary to con-

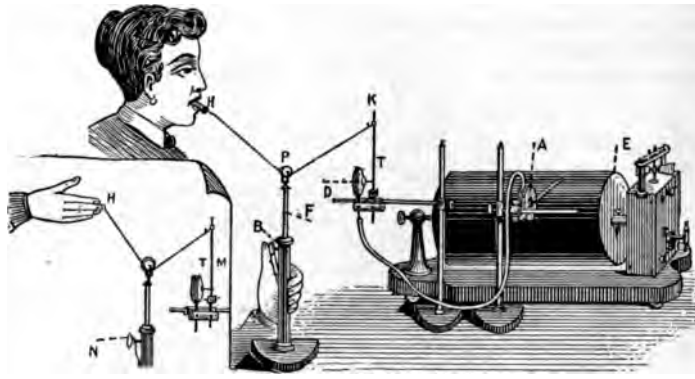


FIG. 35.—Apparatus for measuring the movement of hand, tongue, etc. (Filliatre.)

nect the hand with the different levers corresponding to the three principal directions, and to record separately the movements of each of these levers. To record these movements on the same cylinder, angular levers must be interposed between the rod upon which the finger rests and the marker on the cylinder. The horizontal movement of the hand is transformed into a vertical movement of the

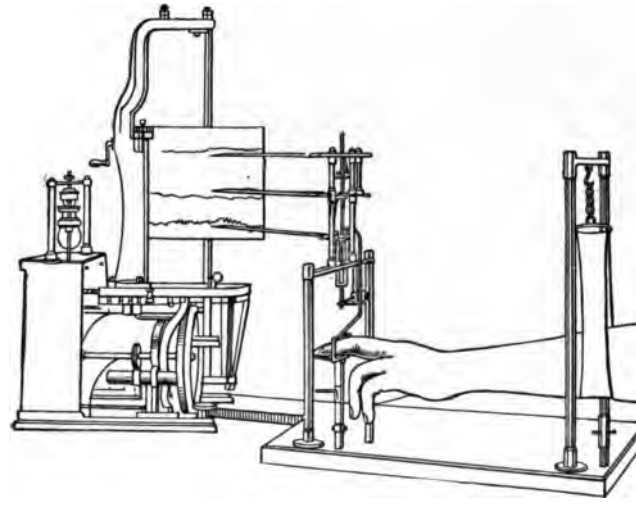


FIG. 36.—Psychograph. (Sommer.)

marker. Sommer considers his instrument useful in the study of nervous functional diseases. The curves in fig. 37, below, show the trembling of the hand of a person with paralysis. The first curve indicates horizontal movements forward and backward; the second lateral horizontal movements. The third curve, hand movements up and down. The trembling is quite different in each of the three directions. Maker is Schmidt, of Giessen, Germany.

Hypnotic Instruments.

Hypnotic instruments are used as aids to the operator in producing hypnotism or suggestions.

The hypnotic ball (fig. 38) has been used at the Hospital Saltpêtrière in Paris. It consists of a curved flat piece of metal B, holding a lead wire A, on which is fastened

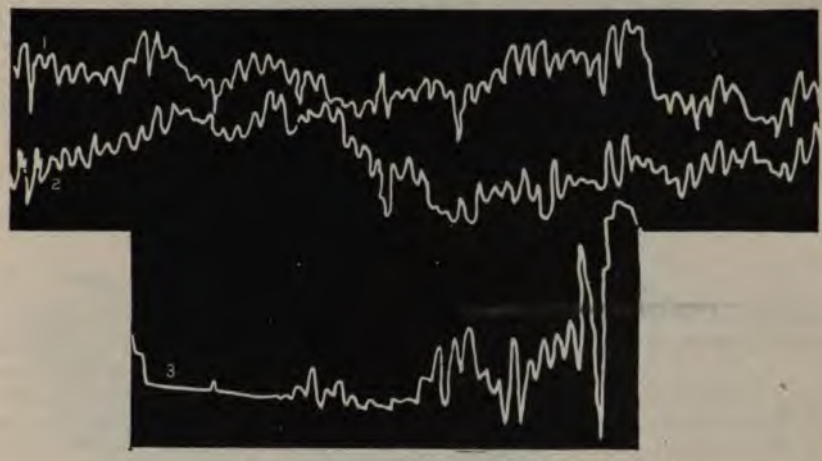


Fig. 37.—Trembling of hand in paralysis.

a nickel ball 15 millimeters in diameter, which can be changed from one position to another by bending the wire. The ball is so placed as to strain the attention; the muscles of the eye are fatigued. After concentrating the eyes upon the ball for awhile the operator can suggest heaviness of eyelids, sleepiness, and the like. There is an imitation of nature here, as when we feel sleepy our eyelids are heavy and we can hardly keep them open. Maker, Verdin, Paris.

Fig. 38.—Hypnotic ball.

Mirror-Hypnotizer.

Fig. 39 represents a mirror-hypnotizer, consisting of two revolving ebony pieces about 8 inches long, 1 inch wide, and a quarter of an inch thick, each piece having seven mirrors. The instrument is run by clockwork. Some subjects are peculiarly susceptible to the dazzling of the revolving mirrors. If several persons are in a room and mirror-hypnotizers are placed one before each person who desires to be hypnotized, some may fall into a hypnotic sleep without the aid of the operator, especially those who have been hypnotized before. Others may be so affected as to be quickly hypnotized by the operator. Maker, Mathieu, Paris.

Suggestion Blocks.

An experiment with the two round blocks (one 9 centimeters in diameter by 3 centimeters thick, the other 3 centimeters in diameter by 3 centimeters thick), fig. 40, below, will serve as an example of what may be called natural suggestion. The blocks each weigh exactly 55 grams. If held, say between the thumb and second finger of both hands at the same time, or of one hand at successive times, the smaller block will feel the heavier. The blocks at their centers are held between the fingers,

so that the special contact of each block with the fingers and thumb is the same. It is perhaps generally true that when objects look alike in every respect, except that

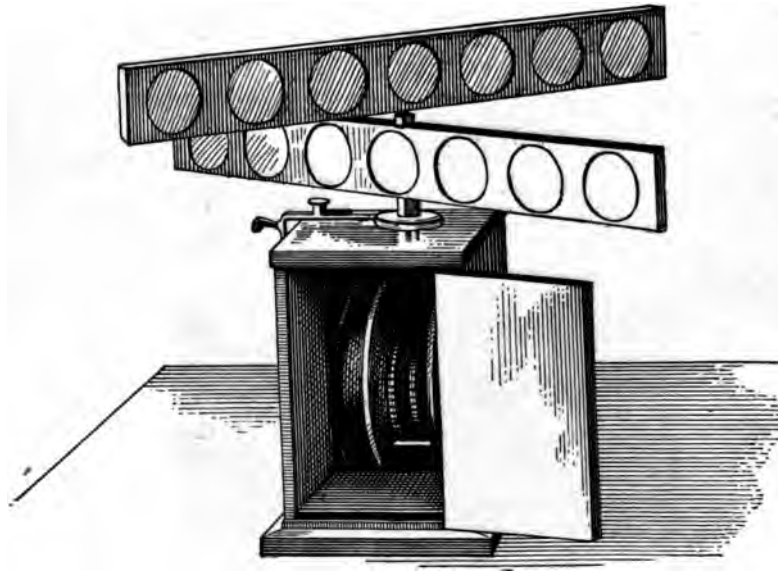


FIG. 39.—Mirror-hypnotizer.

one is larger than the others, we think the largest one to be the heaviest before we lift them. But if upon lifting them the largest one does not feel the heavier, an unconscious counter suggestion seems to make us feel the smallest block heavier; it

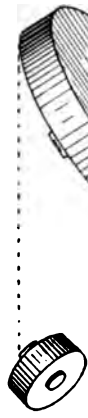


FIG. 40.—Suggestion blocks. (Gilbert.)

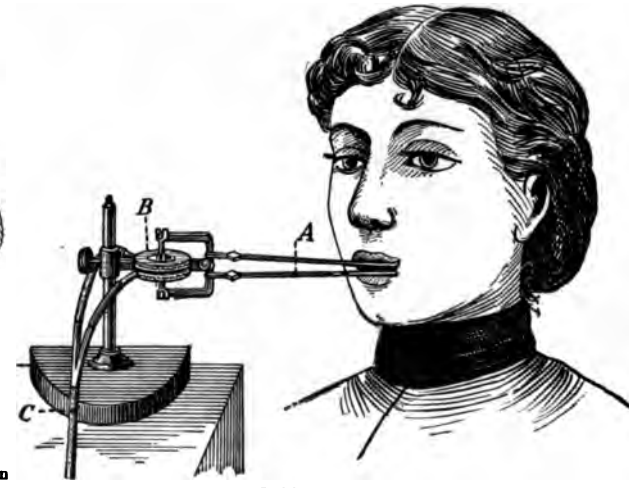


FIG. 41.—Labiograph. (Rousselot.)

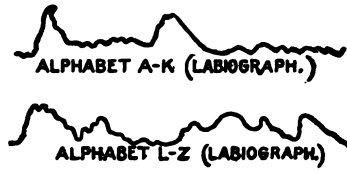
is an illustration of the adage that a pound of lead is heavier than a pound of feathers. As Professor Scripture puts it, it is a "disappointed suggestion of weight." In a series of experiments with different blocks upon New Haven school children, Scripture and Gilbert have shown that suggestibility slowly increases from 6 year to 9 years of age; after 9 years it steadily decreases as the children grow older. The girls were found more susceptible to suggestion than the boys, with the exception of age 9, where both were very susceptible. Dr. Gilbert, of the Yale laboratory, has

designed fourteen apparently solid black round blocks, each 6 centimeters in diameter and 3 centimeters thick, having weights of 15, 20, 25, etc., up to and including 80 grams. Maker, Willyoung & Co., Philadelphia, Pa.

Mechanics of Speech.

Speech involves specially the muscles of the tongue, lips, larynx, soft palate, etc. The labiograph (fig. 41) is an instrument with two brass levers A, grooved so as to fit the lips.

These levers are connected with a tambour B, which in turn is connected with a recording tambour by the rubber tube C. Here is the tracing of the movement of the lips while repeating the alphabet:



The writer made this experiment upon a young man who repeated the alphabet quite fast. It is thought by some that this instrument might aid in reading the lip movements of the deaf. Maker, Verdin, Paris.

The laryngograph (fig. 42) (maker, Verdin, Paris) gives the movements of the larynx in speech. It consists of an ebony frame which fastens around the neck. To this frame is attached a tambour, B, connected with a brass rod, A, the end of

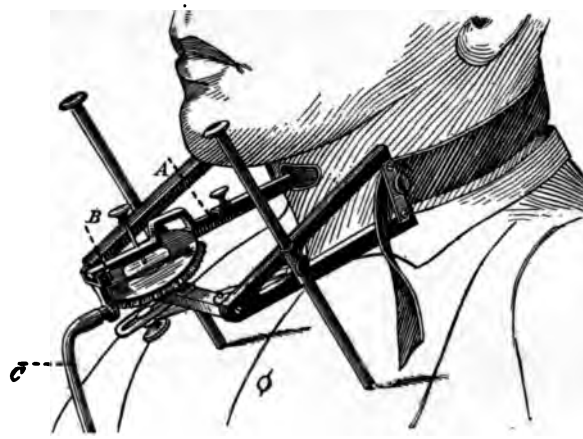
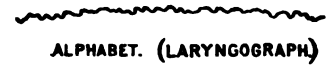


Fig. 42.—Laryngograph.

which consists of a curved nickel plate covered with flannel. This plate rests against the larynx so that its movement up and down is communicated to the tambour B, which is transmitted by the rubber tube C to a recording tambour. Here is a tracing made while repeating the alphabet:



GLOSSO-DYNAMOMETER.

The glosso-dynamometer[1] (fig. 43), as its name indicates, measures the strength of the tongue to resist pressure. It consists of a small brass disk, A, screwed on a steel

[1] Rév. internat. des Sourds-muets, 9e année, février-mars 1894, p. 325.

rod attached to a scale, B. The tongue is stretched out and the subject is asked to resist the pressure of the disk A as much as possible. The scale B indicates the limit of this resistance. Maker, Verdin, Paris.

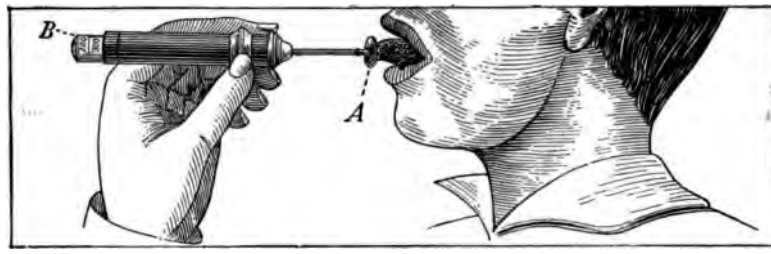


FIG. 43.—Glosso-dynamometer. (Féré.)

PALATOGRAPH.

This palatograph (fig. 44), designed by Dr. Weeks, is to record the movements of the palate in speech. It is composed of the following pieces: A band to fasten around the head, with a rod, H, attached to another rod fixed to the band. At the

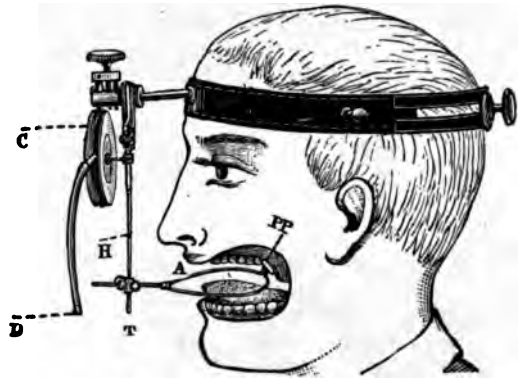


FIG. 44.—Palatograph. (Weeks.)

end of the rod H is fastened a racket-shaped wire, A, with a little round disk, PP, which touches the palate and becomes glued to the palate by a preparation upon the disk. This racket-shaped wire can be kept free from the movements of the mouth and the tongue.

The lever H of the tambour C has near its extremity T a double ring, so that

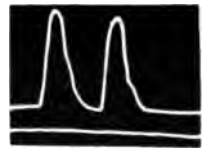


FIG. 45.—No. 1.

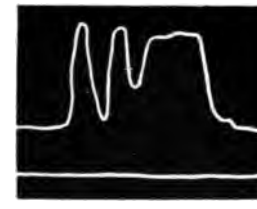


FIG. 45.—No. 2.

the movements of the palate are transferred to the lever or rod H, which in turn communicates them to the tambour to be recorded on a cylinder. Here are two tracings made by Weeks, which read from right to left.

No. 1 represents the movements of the palate, when the French word "fonte" is spoken; the first summit or wave represents the "f," the second summit the "t" in the word "fonte."

No. 2 represents the French word "continuité," where it appears that the nasal syllable "con" requires more movement.

Maker, Verdin, Paris.

THE DYNAMOLABIOMETER.

The instrument represented in fig. 50 was designed by Dr. Féré and Monsieur Boyer, professor at the National School for the Deaf in France. It is used for the

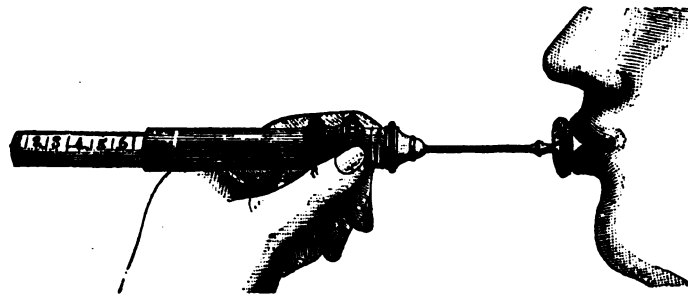


FIG. 50.—Dynamolabiometer. (Féré and Boyer.)

study of the development of the lips of the deaf, and based upon the same principles as that of the sphygmometer in fig. 55, but made somewhat stronger. Total length of instrument is 20 centimeters; diameter of the disk is 40 millimeters; diameter of the body of instrument is 15 millimeters. The maximum amount of pressure is 1,500 grams. The disk is slightly concave on the side that presses the lips. Maker, Verdin, Paris.

THE SPHYGMOGRAPH.

The sphygmograph records the variations of blood-pressure in the arteries. Each time that the heart sends a wave of blood into the arterial system there is produced in each artery a hardening which follows the movement of the wave of blood.

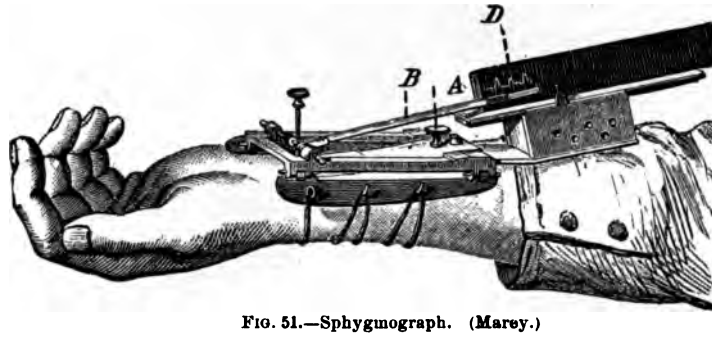
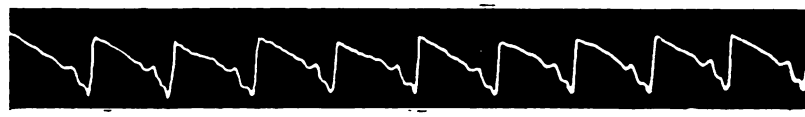


FIG. 51.—Sphygmograph. (Marey.)

There are two kinds of sphygmographs—the direct and those by transmission. Fig. 51 represents a direct sphygmograph of Marey, which is applied to the exterior of an artery and records the wave movement (hardening, or change of pressure). The direct sphygmograph presses upon the artery by means of a spring, the pressure of which is regulated by a screw A. As the blood-wave comes in the artery the walls of the artery rise and fall, transmitting this movement to the sphygmograph, which movement is recorded by the lever B on the smoked paper D. The arterial wall pressed down by the spring rises, as the blood-wave advances, to the normal diameter.

The radial artery is the one upon which the sphygmograph is usually placed. We give tracings of Marey's sphygmograph: Maker, Verdin, Paris.

No. 1.—Normal pulse.



No. 2.—Typhoid fever (period of decline).

No. 4.—Rheumatismal pericarditis with fever.

No. 6.—Pulse of an aged man (extreme rarity of beats).

SPHYGMOGRARH BY TRANSMISSION.

The sphygmograph by transmission,[1] or indirect sphygmograph (fig. 52), has the advantage of giving the tracings a very good length, so that certain irregularities are recorded that would escape one's notice with the ordinary sphygmograph with its short tracings. If one desires to see the influence of different physiological conditions on the pulse, or to record simultaneously the pulse of several arteries, or the

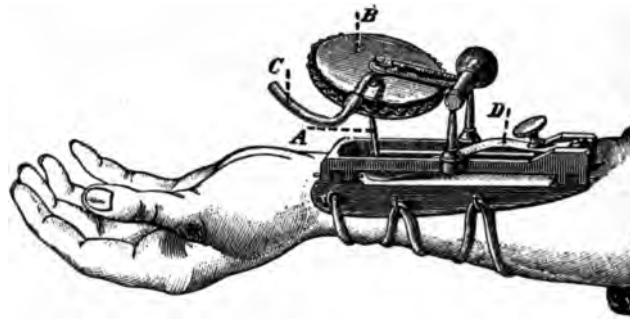


FIG. 52.—Sphygmograph by transmission. (Marey.)

arterial pulse with the pulsation of the heart, the indirect sphygmograph is used. The adjustable steel-rod A rests on the end of the spring D, which is directly over the pulse. The pulse-beat is carried to the tambour B, from which it is carried to some recording tambour, through the rubber tube C. Maker, Verdin, Paris.

[1] Marey. Circulation du sang, 2e édition.

SPHYGMOGRAPH OF PHILADELPHIEN.

The sphygmograph of Monsieur Philadelphien (fig. 53) has the advantage of measuring exactly on the scale 3 the amount of pressure upon the artery in obtaining the tracing. It is known that the tracings change in form and amplitude according to the pressure upon the artery.

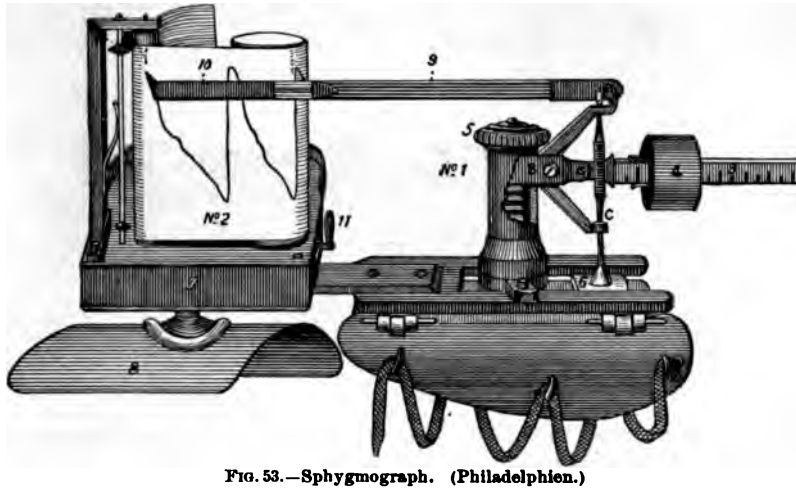
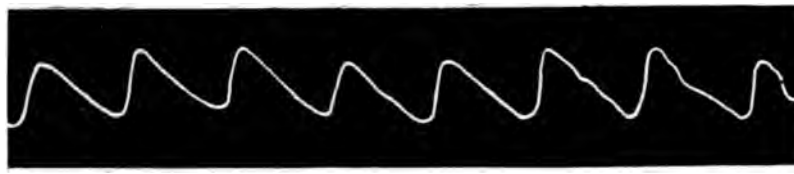


FIG. 53.—Sphygmograph. (Philadelphien.)

The tracings are made with ink on a band of paper 2, which is a meter long. This instrument permits a number of tracings of variable forms according to the pressure of the ivory plate 6 upon the artery, which is regulated by the weight 4. The screw 5 regulates the plate of ivory 6 in connection with the artery on the marker 10. The handle 11 starts or stops the clockwork 7.

Here are some tracings:

Normal pulse.



Mitral insufficiency.

Maker of instrument: Verdin, Paris.

VON FREY'S SPHYGMOGRAPH.

Von Frey's sphygmograph (fig. 54) has for its purpose to give as true a representation of the arterial pulse as possible and an exact time measurement. It rests upon the steel band A. An ebony oval piece, B, at the end of the steel spring rests upon

the artery, connecting directly with the marker D. Another marker for the time can be fastened to the steel box C, which incases the clockwork, which records fifths of a second. Maker: Petzold, Leipzig.

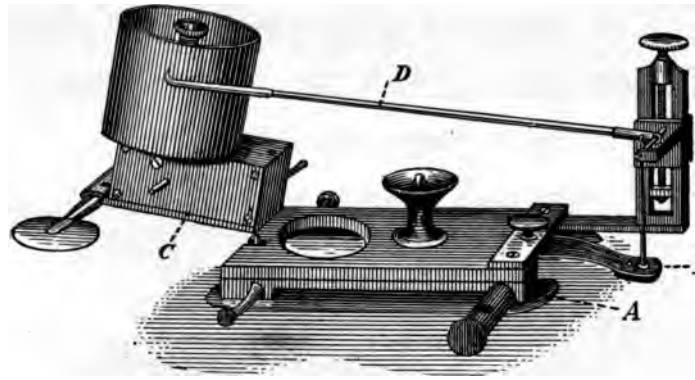


Fig. 54.—Sphygmograph. (Von Frey.)

THE SPHYGMOMETER.

The sphygmometer is employed to measure the amount of pressure necessary to arrest the radial pulse beats.

In Verdin's instrument (fig. 55) the left thumb, B, of the operator rests upon the radial artery of the right hand of the subject. The instrument is held in the right hand of the operator, who presses it upon his thumb nail until no pulse can be felt. Then the amount of pressure is read from the scale S. The instrument consists of

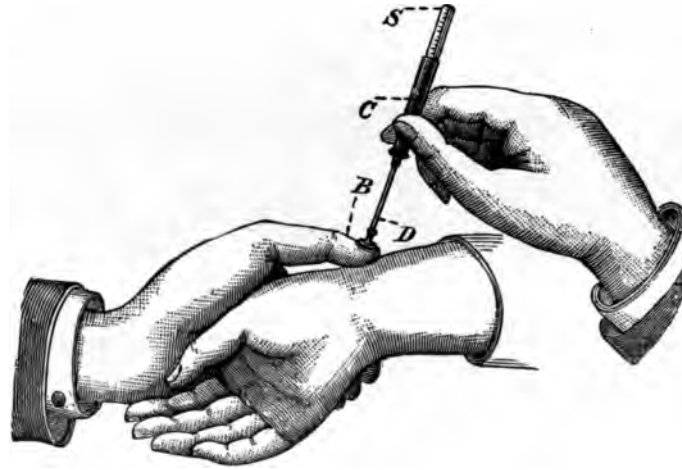


Fig. 55.—Sphygmometer. (Verdin.)

a small cylinder of brass, C, containing a spring acting in connection with the rod D. A brass circular plate three-eighths of an inch in diameter is screwed on to the end of this rod. The instrument is five and a half inches in length.

When the pulse is bounding, or has some intensity, its complete suppression may appear difficult. There are recurrent beats that can give difficulty, but a little practice will overcome these causes of error. Maker and inventor: Verdin, Paris.

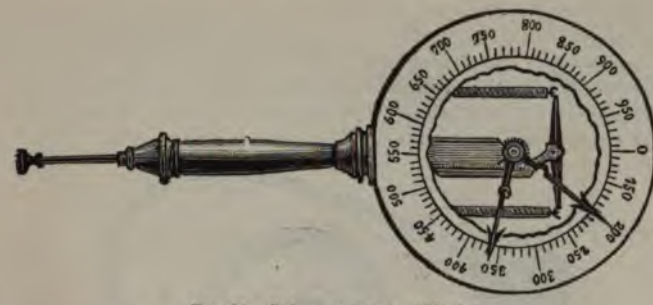


FIG. 56.—Sphygmometer. (Bloch.)

The sphygmometer in fig. 56, designed by Bloch, is modified by Verdin. Two exterior springs are fixed behind the scale; there are two pointers, one pushing the other. The latter remains at highest point of pressure, indicating the amount. This instrument is used for demonstrations at a distance. Maker: Verdin, Paris.

MOSSO'S SPHYGMOMANOMETER.

The sphygmomanometer of Mosso (fig. 57) enables one to record the pulsations of four fingers, which are pushed into rubber tubes E E. The instrument is filled with water, and communicates with the cylinder A, the revolving piston of which regu-

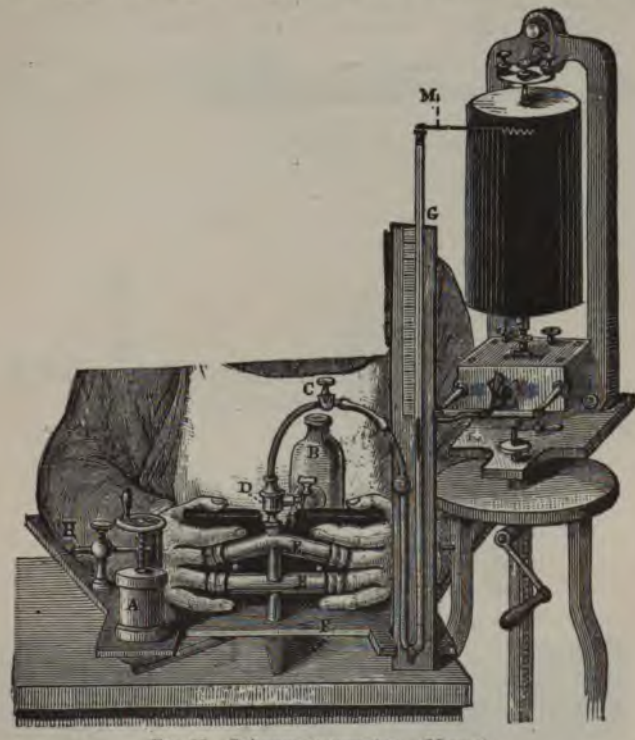


FIG. 57.—Sphygmomanometer. (Mosso.)

lates the pressure of the water. The bottle B receives the water forced out when the fingers are introduced into the tubes E E. A manometer, G, indicates the pressure, and the marker M records the pulse waves on the cylinder.

C is a faucet to let out the air. By means of the manometer G the sphygmograph will record the periodical changes of blood pressure or tension, and their correlation to mental conditions. The instrument can be used instead of the plethysmograph (fig. 18) for research in the circulation of the blood, for the study of the inervations of the blood vessels, of the effects of medicaments on the circulation, and of pathological conditions. Maker: Verdin, Paris.

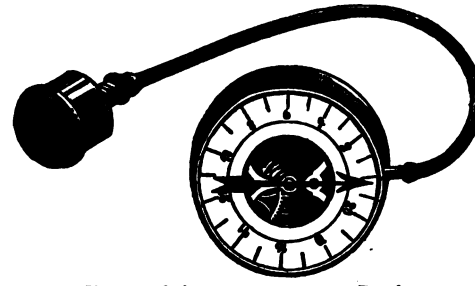


FIG. 58.—Sphygmomanometer. (Basch.)

SPHYGMOMANOMETER.

The sphygmomanometer (fig. 58) measures blood pressure in the arteries. Maker, Windler, Berlin.

ACHROMATOMETER OF BLOCH.

This instrument[2] (fig. 59) is designed to measure the blood pressure in the capillaries. It consists of a rod with spring; at the end of the rod is an iron disk, A.

FIG. 59.—Achromatometer. (Bloch.)

One presses with this disk the part of the body to be explored, as the lobe of the ear, the finger nails, or skin of the hand, etc. The pressure drives the blood from the small vessels, the part pressed by the disk becomes pale, and one reads on the scale the amount of pressure in grams required.

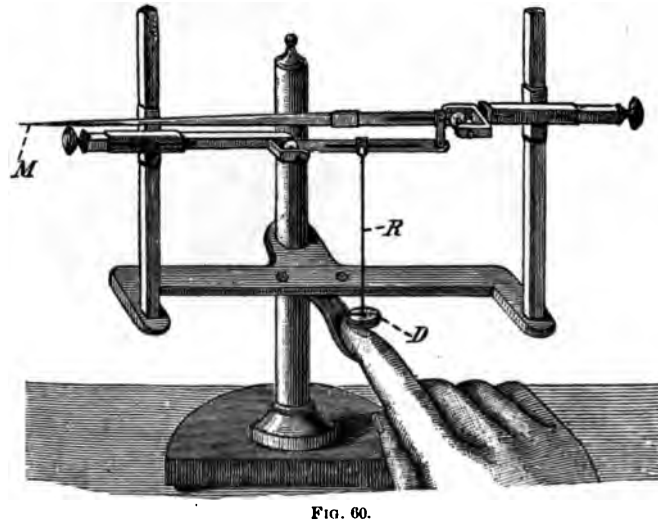


FIG. 60.

Fig. 60 represents an instrument for recording pulsations of the vessels on a circumscribed region of the skin. A disk, D, rests upon the index finger; the disk is

[2] L'Intermédiaire des Biologistes, 5 novembre 1897.

fastened to a small rod, R, communicating with a lever, by means of which the pulsations of the small vessels are recorded by the pointer M. Maker, Verdin, Paris.

Dr. Chéron has prepared the following table, which transforms the results of the sphygmometer into centimeters of mercury.

TABLE 5.

Grams.	Centimeters of mercury.	Grams.	Centimeters of mercury.
100	3	700	15
150	4	*a*750	*a*16
200	5	*a*800	*a*17
250	6	*a*850	*a*18
300	7	900	19
350	8	950	20
400	9	1,000	21
450	10	1,050	22
500	11	1,100	23
550	12	1,150	24
600	13	1,200	25
650	14	1,250	26

a Normal pressure.

THE CARDIOGRAPH.

The heart-beat or cardiac impulse is visible in the fifth left intercostal space, 2 inches below the nipple and 1¼ to 1 inch to its sternal side. The cardiograph measures the cardiac impulse. The cardiograph stethoscope (fig. 61), below, consists of a button, B, which by turning increases or decreases the pressure of the knob H, against the walls of the chest. F is a bell-shaped piece of wood forming the stethoscope. D is a ferrule of brass on which is fastened a rubber tube to be introduced into the ear for mono-auricular auscultation. An elastic chord, C E, placed around the body holds the apparatus against the chest. By fastening a rubber tube on A, the heart-beats can be transferred to a recording tambour. Maker, Verdin, Paris.

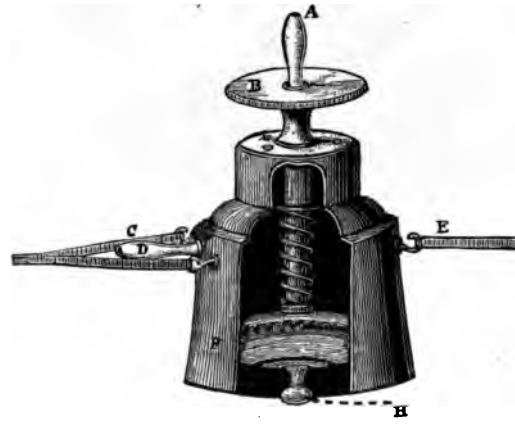


FIG. 61.—Cardiograph stethoscope. (Edgren.)

THE PHONENDOSCOPE.

The phonendoscope (fig. 62) serves to render perceptible all normal or abnormal sounds in the human body. The instrument below in the figure gives more intensity to the sounds than the ordinary stethoscope. It renders perceptible—

1. The sounds of respiration, circulation, and of the digestive organs.
2. The sounds of the muscles, articulations, and bones.

3. The sounds of the capillary circulation (dermatophony).

4. The sounds produced by morbid states and those determining the size, position, or change of position of organs.

5. The sounds of the eye and ear.

6. The sounds of the uterine murmur and fœtal sounds.

The phonendoscope is composed of two ebony disks, one, L, fastened directly to the body of the instrument, the other, G, above, by means of rings. The body of the instrument B is made of copper (nickel-plated). The lower disk serves for auscultation; the upper disk G is thicker; at its center there is an ebony plate C, into which screws the rod A. This disk, by means of the rod A, is used for percussion. The lower disk L of the phonendoscope has two orifices to receive the auricular tubes, on the ends of which are ebony olive-form rings for the ears.

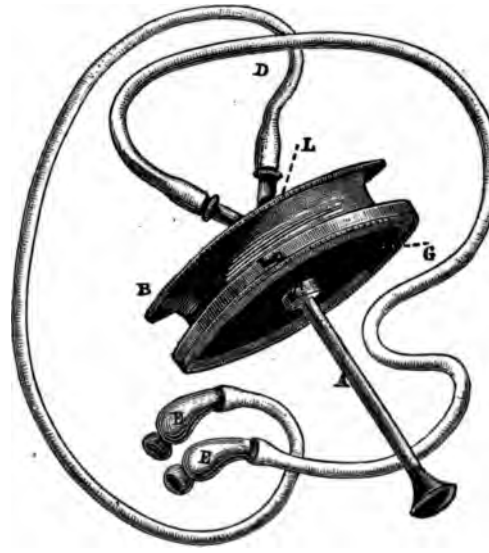


FIG. 62.—Phonendoscope. (Bazzi and Bianchi.)

There is a box for this apparatus; in the box is a compartment for two rods with knobs, one of ordinary length say 55 millimeters, the other 80 millimeters; also two pencils, one blue, the other red. Maker, Verdin, Paris.

THE ERGOGRAPH.

The ergograph (fig. 63) is an apparatus to measure the results of fatigue. The record is made by the marker A, which is attached to a little car B, which slides forward and backward on two parallel horizontal steel rods C. A string is fastened by a leather loop to the finger pulling the car B in one direction, and a weight W, which is attached to a cord fastened to the car, pulls it in the opposite direction. When the finger is bent, the car B is drawn toward the hand; and when the muscles of the finger relax, the weight causes the finger and the car to return to their original position. The marker A records the movements of the car upon a cylinder. The arm and hand are held firm by a special rest, as indicated in the drawing.

Lombard, in a number of experiments with the ergograph upon himself, found that if he voluntarily contracted a muscle frequently and each time raised a weight with his utmost force, the muscle weakened and after a time scarcely stirred the weight. But if now he continued to make this effort, regardless of the results, with all the power of his will, sooner or later the strength of the muscle began to return and to move the weight almost as much as before. Then the strength would gradually

cease for a second time; thus an almost complete loss of power to voluntarily contract the muscles, alternated with periods of nearly complete recovery of the strength. This phenomenon, according to Lombard, was due to the results of fatigue, caused probably by changes in the central nervous system. The writer has made some experiments with the ergograph, and his results are similar to those of Lombard.

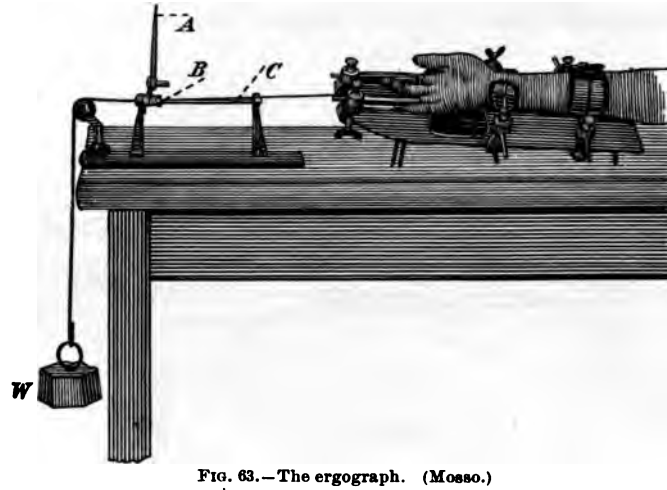


FIG. 63.—The ergograph. (Mosso.)

There are a number of phenomena in which fatigue causes a periodicity depending upon the central nervous system. This is probable in the "second wind" of the athlete. The intensity of after-images is due to periodic variation. Maker, Verdin, Paris.

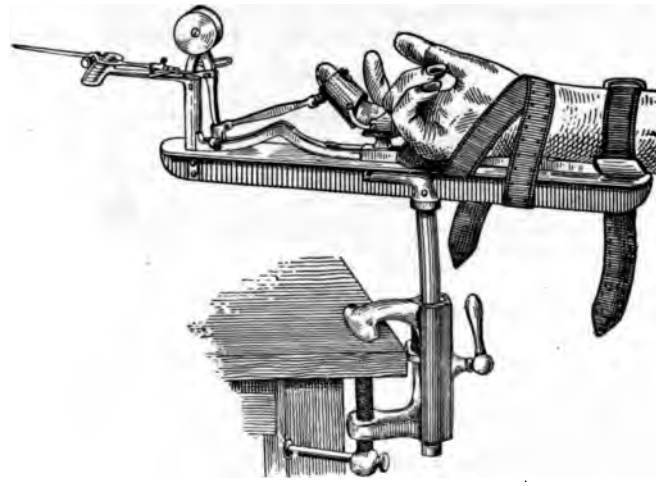


FIG. 64.—Spring ergograph. (Binet and Vaschide.)

SPRING ERGOGRAPH.

Professor Cattell has designed a new ergograph in which a spring dynamometer is substituted for the weight used by Mosso. It is claimed that this has many advantages over the lifted weight used by Mosso. Questions of the relation of muscular to mental fatigue are not only of theoretic interest, but have practical value in schools.

Binet and Vaschide have also made an ergograph[1] (fig. 64), which is a modification of Mosso's ergograph. It consists in the substitution of a spring, as illustrated in the figure, for the weight and in using the middle finger for the experiment.

The lever permits one to increase or decrease at will the course of the finger in order to accomplish a certain work, while the force of resistance remains the same. It is possible to modify one single factor in work and the space gone over, and so to study points in the physiology of movement.

THE KINESIMETER.

The kinesimeter is an instrument to measure the sense of movement upon the skin. The apparatus in fig. 65 was designed by Professors Scripture (Yale University) and Titchener (Cornell University).[2]

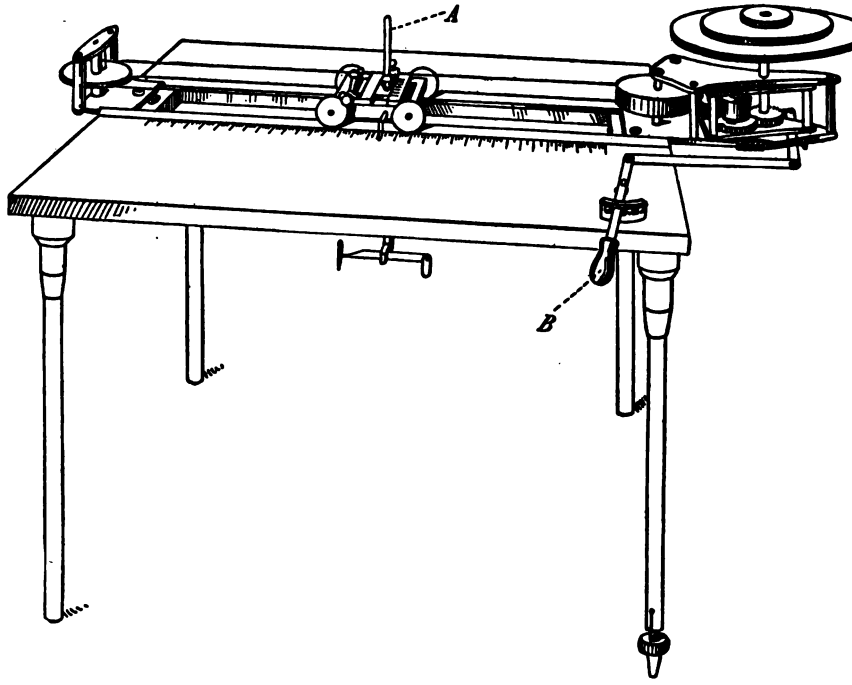


FIG. 65.—Kinesimeter. (Scripture and Titchener.)

The table is of brass casting, the top of which is perfectly smooth. One of the legs has an adjusting screw. The car A is made of brass, nickel-plated; it runs on four wheels, turned on a perfectly true arbor. The bearings are bushings of hardened tool-steel; the holes are ground and lapped, so as to give trueness in running. The wheels are easily taken off their bearings. The horizontal slide of the car, which holds the vertical rod, is easily adjusted. The vertical rod may carry rubber stimulus-point, tube, or whatever is preferred, and is held in position by a brass nut. The rotating power comprises three gears and three friction-rolls. The movement of the car is regulated by a lever. The pressure of the driving-rolls against the principal roll is maintained by two springs, and is adjusted by two nuts on end of a bar connected with the lever. An endless cord propels the car. The instrument is made at the Yale Laboratory, New Haven, Conn.

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[1] L. Intermédiaire des Biologistes, 5 May, 1898.

[2] American Journal of Psychology, Vol. VI, 1895, page 425.

TOUCH-WEIGHTS.

Touch-weights for finding the threshold of contact with the skin (fig. 66) consist of little disks 3 millimeters in diameter suspended from a fine cocoon-fiber fastened to a wood handle. The handles are stuck into holes in a round block, A, fastened to a pillar and frame. We take out the lightest disk B and let it touch the skin while the subject's eyes are closed; if nothing is felt, the next heavier disk is used, and so on until the least pressure of the disk is felt. The disks weigh from

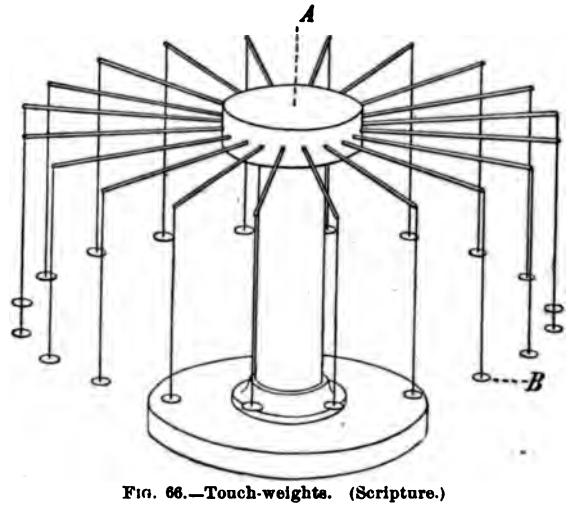

FIG. 66.—Touch-weights. (Scripture.)

1 to 20 milligrams. Scripture finds the threshold of sensation for the sense of pressure in an average person to be 2 milligrams on the forehead, temple, and back of forearm; 5 milligrams for nose and chin, and 15 milligrams on inner surface of fingers. Maker: Willyoung, Philadelphia, Pa.

HAIR-ESTHESIOMETER.

In order to produce very slight pressure upon the skin, Professor Von Frey, of Leipzig, has employed hairs of different size and thickness. The hair-esthesiometer (fig. 67) enables one to produce various degrees of pressure with the same hair. The hair

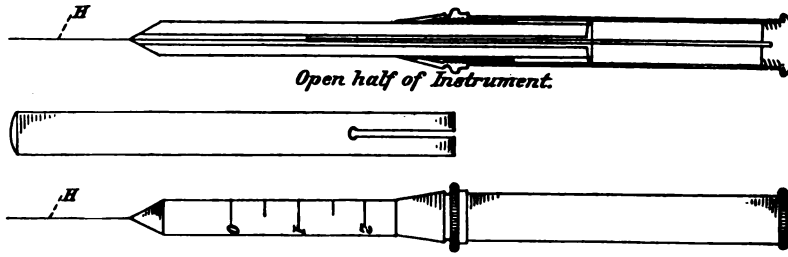

FIG. 67.—Hair-esthesiometer. (Von Frey.)

H is in a capillary tube, and a longer or shorter portion of the hair can be made to come out of the tube; a graduated scale shows the distance or the length the hair projects from the tube. The less the distance the hair projects the greater the pressure exercised by the hair. The hair is pressed vertically against the skin until it bends.[1] The maker of the instrument is Zimmerman, of Leipzig.

[1] Details of the instrument are given by Von Frey in Abhandlungen d. math. physch. Classe d. Königl. Sächs Gesellschf d. Wiss., 1866.

THE GALVANOMETER.

The galvanometer measures the strength of an electric current. The instrument (fig. 68) is used for medico-electrical purposes. It is also employed in scientific investigations, and is then so constructed that the strength of the most delicate current can be measured.

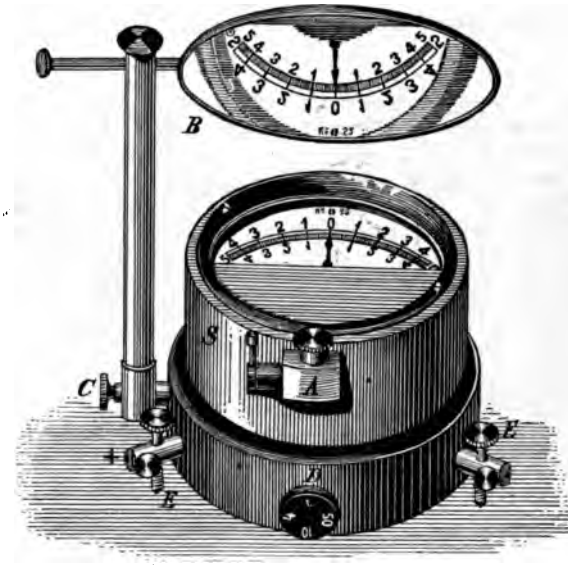

FIG. 68.—A periodic horizontal galvanometer. (Hirschmann.)

The instrument is represented one-third its real size. This is a direct-reading instrument, it being possible to measure a current to one one-hundredth of a milliampère. In order to have a vertical reading, a mirror, B, is used. The lever S arrests the needle, which is brought to the zero point of the scale. The wires for conducting the current are fastened in the clamps E E. Maker: Hirschmann, Berlin.

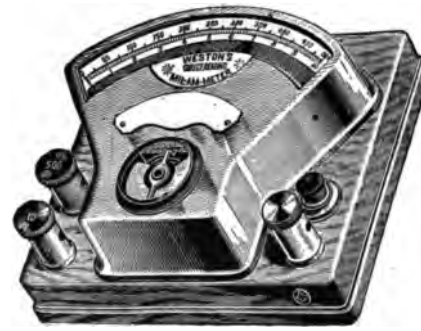

FIG. 69.—Weston's standard direct-reading mil-am-meter.

Fig. 69 represents a convenient form of instrument for measuring delicate currents. It has a scale of double values with ratio of 50. Each division on upper scale values is 5 milliampères; each division on the lower scale values is one-tenth milliampère, readable to one one-hundredth. A change from one scale to the other is made by changing the connection on the left of the instrument from one binding post to the other. Maker: Weston Electric Instrument Company, Newark, N. J.

THE FARADIMETER.

The two instruments just mentioned measure the galvanic or direct current only. The instrument below (fig. 70) is a faradimeter and measures the faradic or indirect current. This form of the instrument is transportable. The case which covers it is 12 centimeters wide, 20 centimeters long, and 29 centimeters high. When in use it is laid on the table, as shown in the drawing. The induction apparatus P S is placed at such a distance that the galvanometer G is not influenced by it. The

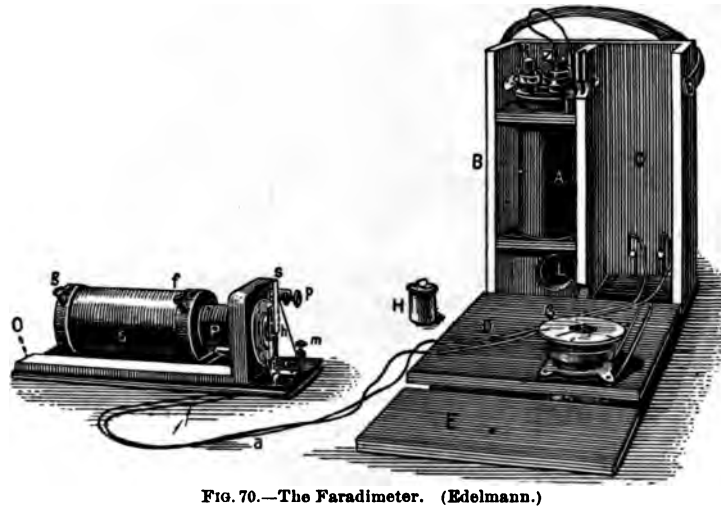

FIG. 70.—The Faradimeter. (Edelmann.)

induction coil P S, by means of wires a, is connected with the battery A for the primary current. The faradimeter is gauged only for a certain intensity of the primary current (O. 4 A) so that the galvanometer G is to measure the strength of this current. The intensity desired is obtained by first placing the galvanometer at zero and then sinking the zinc rod Z into the element A until the needle of the galvanometer reaches the desired intensity on its scale, while the interrupting spring S is pressed tightly against the contact screw p with the finger.

The battery A is filled with a solution of crystallized chromic acid, which consists of water up to about 3 centimeters from the top of A and of a half glassful (H) of

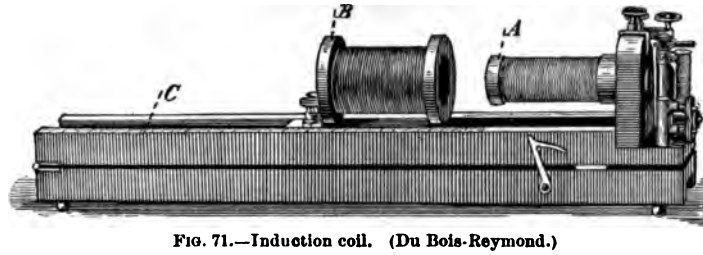

FIG. 71.—Induction coil. (Du Bois-Reymond.)

the acid. When the battery is not in use the zinc rod Z is taken out, washed, and placed in a case at the side of the battery. The chromic acid solution can be left in the battery so long as it furnishes the desired strength of current. When the interrupting spring plays and the primary current is at its normal strength (which from time to time should be tested by pressing the spring against the contact screw p) the secondary induced or indirect current is developed, so that the maximum of any single opening of the induction stroke has the value indicated by the induction coil S by means of the pointer on the scale O. Maker, Edelmann, of Munich.

INDUCTION COIL.

In fig. 71 is represented Du Bois-Reymond's pattern of an induction coil. The primary coil A is fixed at the end of a wooden base board and consists of a coil of thick copper wire wound around a bundle of soft iron wires. The secondary coil B is wound around a wooden reel and slides in a groove in the base-board and can pass over the primary coil, its position being read from a scale, C, in millimeters fixed to the base. The secondary coil consists of about 7,000 convolutions of fine wire. The base is made long with a hinge in the middle, but is represented folded back in the engraving, which makes it more portable. The hammer for giving a series of induced currents is arranged so it can break the current absolutely in the primary coil or can shorten its circuit. Maker, Cambridge Scientific Company, Cambridge, England.

THE RHEOCORD.

The rheocord is an instrument for measuring the resistance or for varying the strength of an electric current, in proportion to the greater or less length of it

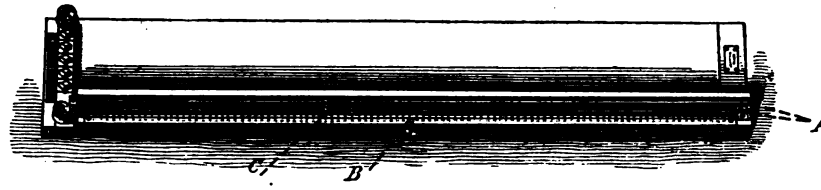

FIG. 72.—Du Bois-Reymond's rheocord.

inserted into the circuit. Du Bois-Reymond's pattern (fig. 72) consists of two platinum wires stretched by the side of a scale B 1 meter long attached to a board. The wires are electrically connected by an ebonite trough, C, containing mercury, which slides along the wires; its position can be read on the scale. The terminals are connected to one end of each of the platinum wires by means of brass plates.

In one of these plates there are five pegs, which can be removed like those of a resistance-box, and various resistances thrown into the circuit; thus when the peg opposite No. 3 is removed, a resistance equal to three times the resistance obtained by sliding the trough to the far end of the scale is thrown into the circuit. In this way the resistance of the rheocord can be gradually increased from zero to a resistance

FIG. 73.—Erb's electrode.

equal to 42 meters of the platinum wire. Maker, Cambridge Scientific Instrument Company, Cambridge, England.

THE ELECTRODE.

In investigation with the Faradic or induced current, one of the standard electrodes employed is that of Professor Erb, of Heidelberg.

This electrode (fig. 73) consists of a bundle of more than 400 fine metallic wires,[1] which are inclosed in a hard rubber tube about 2 centimeters in diameter. By means of these 400 fine wires a uniform action upon the numerous nerve ends is obtained, and sources of error from sweat canals and hair follicles are avoided. When the first electrical sensation is felt, after the electrode is placed on the skin, the point on the scale is noted where the marker of the induction coil has reached; the coil is moved on still further until the first feeling of pain occurs, and the point

[1] The maker of this electrode is Hirschmann, of Berlin.

on the scale is noted as being the measure of pain through the Faradic current. In this way Professor Erb has obtained the following table giving average figures for healthy men, and a basis for comparison in pathological conditions:

TABLE 6.—*Electrical sensibility.*

Place of applying electrode.	First sensation with an induction coil at a distance on the scale from—	Feeling of pain with induction coil at a distance on the scale from—	Deflections of the needle with 8 cells and 150 resistance.
Cheeks	200-220	120	26°
Neck	180-200	120	22°
Upper arm	200	120	21°
Forearm	190	115	18°
Palm of hand	175	110	15°
Finger ends	125	90	2°
Abdomen	190	120	20°
Leg	170	110	19°
Upper part of foot	175	110	10°
Sole of foot	110	80	5°

DYNAMOMETER.

The dynamometer (fig. 74) is to measure the strength of grasp. The instrument is squeezed in the hand while the arm is held out horizontally from the side of the

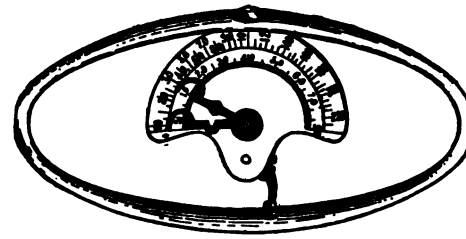

Fig. 74.—Dynamometer. (Collin.)

body. The amount of pressure is read from the scale as indicated by the pointer. Maker, Collin, Paris.

DYNAMOGRAPH.

The instrument in the hand (fig. 75) is a dynamograph. It is used in the laboratory of Salpétrière, at Paris, to record the different impressions which certain hys-

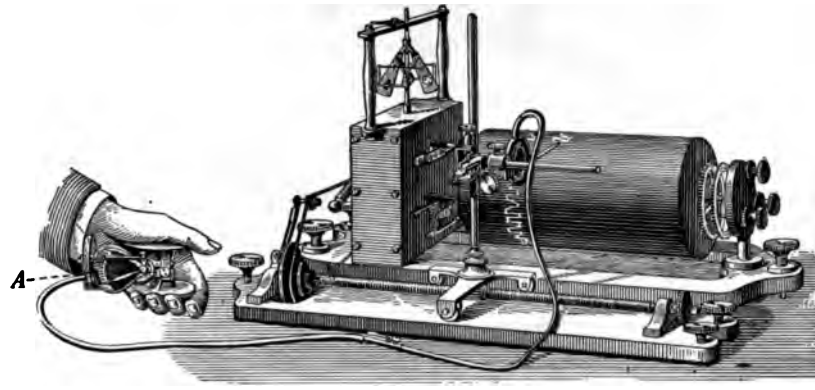

FIG. 75.—Dynamograph. (Duchêne.)

terical subjects experience at the view of a ray of light. It is in reality a dynamometer of Duchêne's, with a tambour, A, attached to it, so that the results may be recorded

on a cylinder, as indicated in the cut. The dynamograph is used also to show the effects of sound and color upon strength of grasp. In sound the pitch has effect

FIG. 76.—Dynamometer. (Ulmann.)

upon the greatest strength of grasp. Smell and taste have their effects upon the strength. Maker, Verdin, Paris.

In fig. 76 is a form of dynamometer that avoids the unpleasant cutting feeling caused by the handles of the ordinary dynamometer. Maker, Windler, Berlin.

DYNAMOMETER OF CHÉRON AND VERDIN.

One of the inconveniences of the ordinary dynamometers is the pain experienced when one tests his strength of grasp five or six times in succession, for the edges of

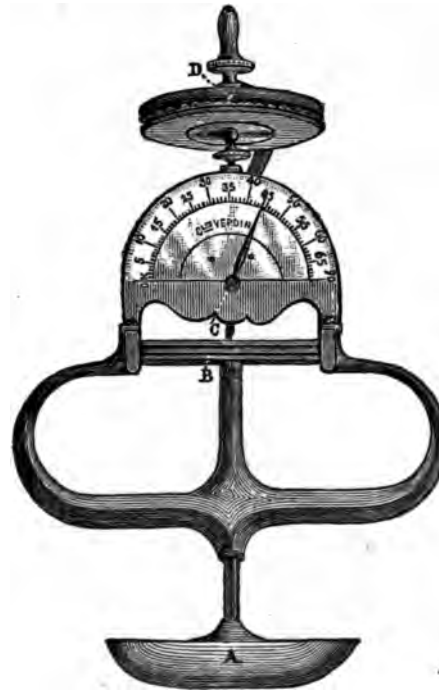

FIG. 77.—Dynamometer of Chéron and Verdin.

the handle produce a cutting sensation, thus rendering the experiments of much less value for comparison.

The dynamometer of Chéron and Verdin (see fig. 77) has been designed to eliminate the inconvenience above mentioned. The fingers are placed upon a handle rounded upon all sides; the palm of the hand rests upon a round oval plate A, serving as a handle, which is fastened to a piston and spring connected by a cogwheel and bar C, with the pointer upon the dial. This dynamometer can be changed to a dynamograph, as indicated in the figure, by the addition of a tambour D. The maker is Verdin, of Paris.

SCRIPTURE'S DYNAMOMETER.

Dr. Scripture, of Yale University, has invented a new "dynamometer and the scale of effort." The thumb and index finger are pressed on small knobs borne by two

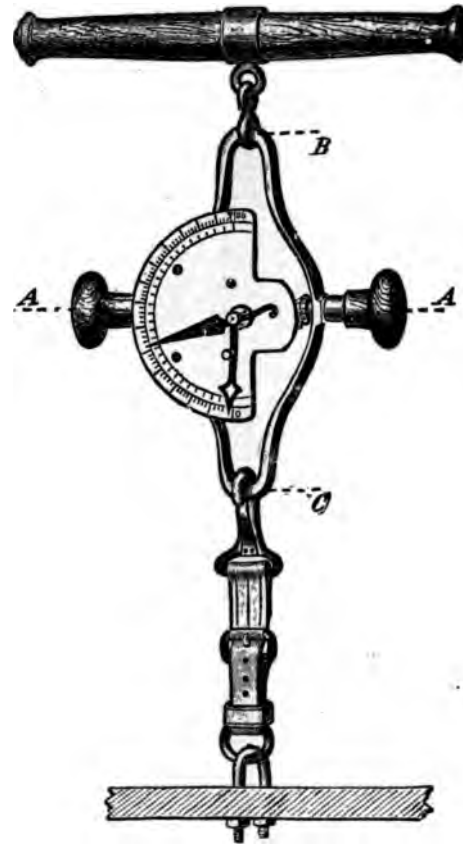

FIG. 78.—Back, chest, and leg dynamometer. (Pfarre.)

steel rods; the amount of movement is small, while the scale can be made very accurate. To transform the psychophysical measurements into purely psychological ones, Scripture proposes to have the subject give his own scales of pressure in the relations of 1, 2, 3, 4, etc., and to reduce all readings to the scale.

CHEST AND BACK DYNAMOMETER.

The dynamometer (fig. 78) may be used to measure the strength of arms and strength of lift. If the handle is unfastened at B and the hook at C from the instrument proper, and with the instrument thus disconnected the two handles A A are pressed against by the hands, the strength of arms and chest can be measured.

With one's elbows extended at the sides until the forearms are on the same horizontal plane, and holding the dynamometer so that the dial will face forward and the indicator point upward, one takes a full breath and pushes hard against the handles A A, allowing the back of the instrument to press on the chest. In measuring the strength of lift the instrument can be attached to the floor, as represented in fig. 78, or to a board, specially designed, on which the subject stands when lifting, thus making the apparatus easily portable. The strength of lift can be taken both with and without bending the knees. In the former instance one stands on the foot rest, with head and body erect and chest thrown forward, bends the knees, sinking down until the handle grasped rests against the thighs, then takes a full breath, lifts hard, principally with the legs, using the hands to hold the handle in place.

In the second instance one does not bend the knees. The handle is grasped with both hands, the body being inclined forward at an angle of 60 degrees, a full breath is taken, and a hard lift is given, mostly with the back. Makers, Tiemann & Co., New York.

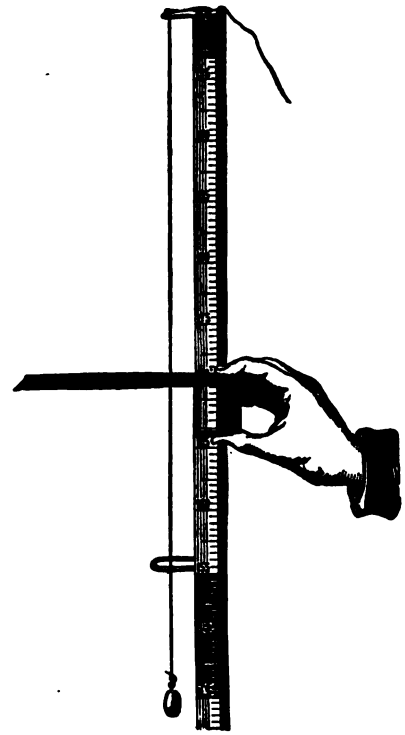

FIG. 79.—Anthropometer. (Topinard.)

THE ANTHROPOMETER.

The anthropometer (fig. 79) is for measuring the height and sitting height. It is divided into four pieces that screw one to the other, so that it can be taken apart and made conveniently portable. Maker, Collin, Paris.

CEPHALOMETRIC SQUARE.

The cephalometric square (fig. 80) is used to make detailed measurements of the projections of the face. Instead of measuring from the ground surface on which the person stands, as in finding the height, the measurement is taken with a square B (fig. 80), on one arm of which is a scale in millimeters. The other arm of the

square is held over the vertex as horizontal as possible with the left hand, while with the right hand a three-cornered piece of wood is run up and down the scale, measuring the distance of the projections of the face from the horizontal plane of the vertex. This distance might be measured from the ground, but there is more liability to error, owing to the tense or loose position of the body in standing. Maker, Collin, Paris.

CALIPERS.

The calipers in fig. 81 are used to measure the head, especially its length and width. The instrument represented consists of a scale A, in millimeters, fastened to one arm B, and sliding through the other arm. Maker, Collin, Paris.

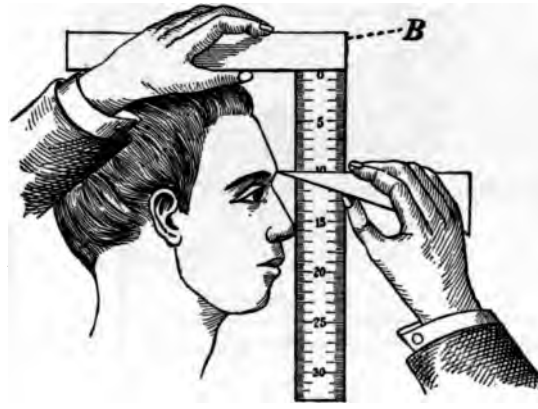

FIG. 80.—Cephalometric square.

The calipers (called "glissière anthropometrique") in fig. 82 are divided into two parts. There are two steel rods, one of which slides on the scale. This instrument

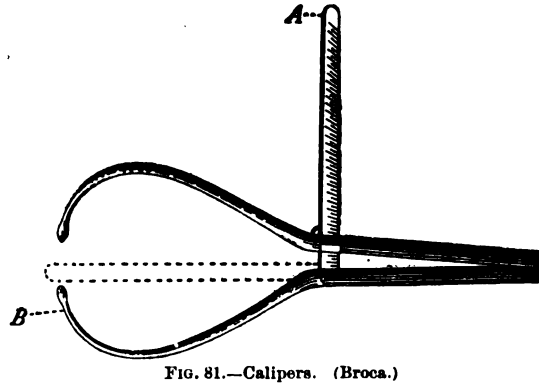

FIG. 81.—Calipers. (Broca.)

is used for direct measurements, as well as for measuring the projections or larger members of the body, such as leg, arm, shoulder, etc. Maker, Collin, Paris.

In fig. 83 are represented small sliding calipers made of steel. They measure very exactly distances between projections of the body and head. Maker, Collin, Paris.

THE GONIOMETER.

The goniometer[1] is an instrument for measuring angles, as of the face or cranium. The one in fig. 84 is the design of Topinard. Broca has also designed a similar

[1] Bull. Soc. d'Anthropologie, 2 sér., tome ix.

goniometer and also a goniometer for the ear; also a profile-klinometer.[1] Maker, Collin, Paris.

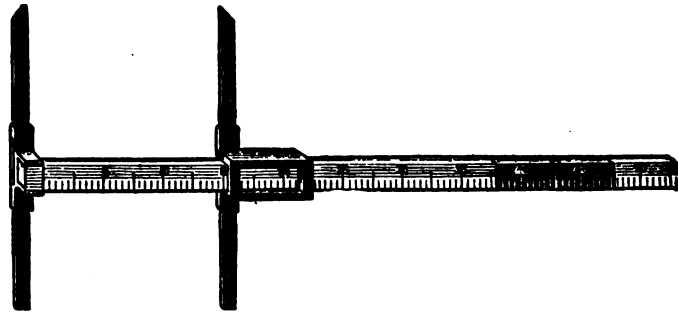

FIG. 82.—Calipers. (Topinard.)[2]

HEIGHT OF VAULT OR PALATE.

In 4,614 measurements Talbot finds the average height of the palate to be 0.58 of

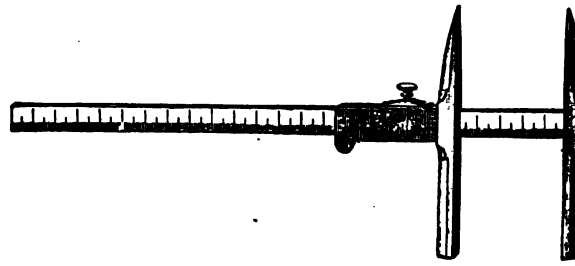

FIG. 83.—Sliding calipers. (Topinard.)

an inch. Fig. 85 illustrates his instrument. The measurement is made from the alveolar border, between the second bicuspid and the first permanent molar, to the

FIG. 84.—Goniometer. (Topinard.)

height of the arch. The cut (fig. 85) shows the position of the instrument when the measurement is made:

[1] Schmidt, Emile. Anthropologische Methoden, Leipzig, 1888.

[2] Revue d'Anthrop. 1885, 3 sér. tome viii, page 407.

By turning the steel rod at its end, F, the scale, H (in millimeters), is moved up until it touches the palate, when its height can be read on the scale. The high palate is often found among feeble-minded children.

This instrument is specially made under the direction of the inventor, E. S. Talbot, M. D., D. D. S., Chicago, Ill.

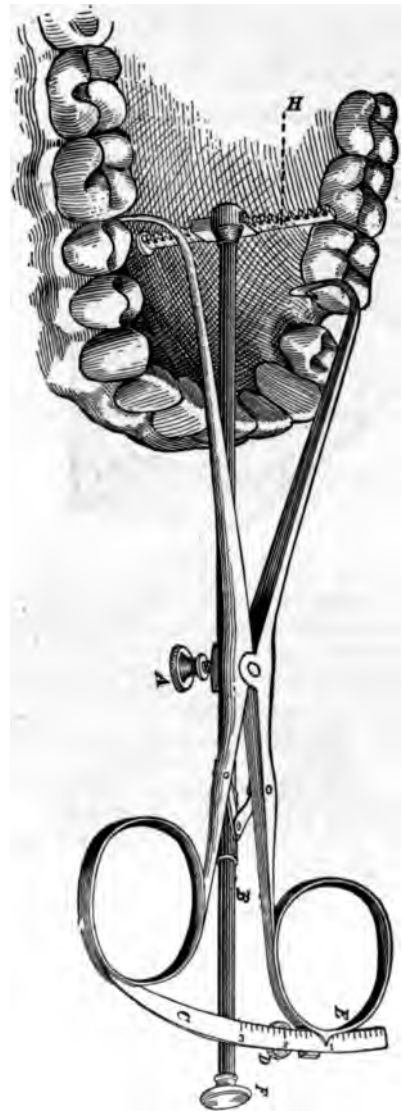

FIG. 85.—Palatometer. (Talbot.)

CASE OF ANTHROPOLOGICAL INSTRUMENTS FOR TRAVELERS, ARRANGED BY TOPINARD.

1. Sliding callipers (fig. 83).
2. Anthropometer (fig. 79).
3. Two special steel squares, used with anthropometer.

4. Cephalometric square (fig. 80) string with plumb.
5. Small wood square.
6. Small steel sliding callipers.
7. Callipers.
8. Tape measure.
9. Pencil with two colors.
10. Dynamometer for strength of hands (fig. 74).
11. Box for carrying instruments.

Maker of case and instruments is Collin, of Paris.

Instruments Used in the Bertillon System of Identification.

The Bertillon system[1] of measurements is primarily for practical purposes—that is, for the identification of criminals, but some of the measurements are also of scientific value.

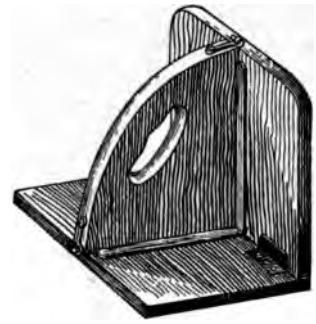

Fig. 86.—Portable square.

Fig. 86 represents a portable square with double projection, and is used in measuring the height and sitting height or trunk, as represented in fig. 87 by B, B. A rule half a meter long, for measuring the sitting height is designated by A. C is a stool used in measuring the trunk. D is a rule for measuring the height.

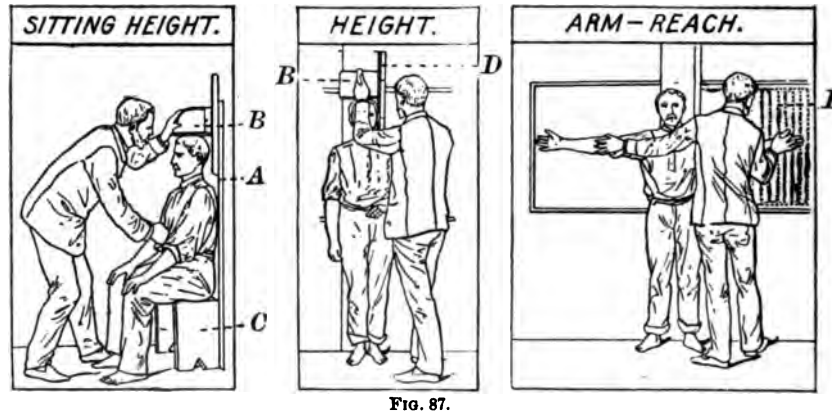

Fig. 87.

In taking the height, the subject should have his back against the wall, his heels together, touching the wall, the knees stiff, the body erect.

In finding the arm reach, the subject has his back to the wall, and extends his

[1] For a detailed account of this system, see The Bertillon System of Identification, published in Chicago, 1896; also Chapter xxviii in Report of Commissioner of Education for 1895–96.

arms horizontally until the tip of his middle finger touches the projection. E represents graduations on paper or oilcloth.

We do not regard this measurement as of great value, because it depends too much upon the will power of the subject to stretch or not to stretch his arms, and therefore may be quite inaccurate. Manouvrier, of the School of Anthropology, of Paris, considers this measurement of very little value.

These calipers are heavier and the ends are more blunt than is the case with calipers in general. They are used for measuring the length and width of head, as

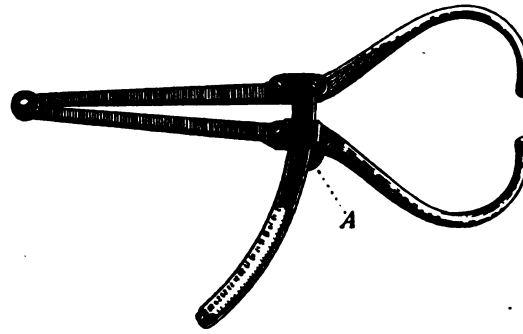

FIG. 88.—Calipers.

represented in fig. 89. The left end of the calipers (fig. 89) is held at the root of the nose; the one measuring watches the scale while he brings the right point of the calipers over the back and middle of the head, thus finding the maximum length of head. The operator removes the calipers from the head of the subject, and by means of a thumbscrew, A (fig. 88), fixes the calipers at the length measured on the scale; then he replaces the calipers upon the head, and tests the accuracy of his measurement by the friction of the right end of the calipers against the back of the head.

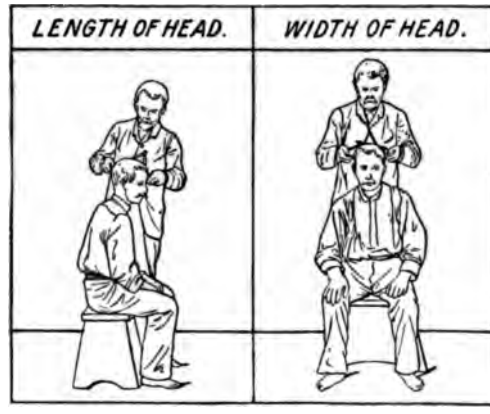

FIG. 89.

The width of the head is measured and verified in a similar way to that of the length. In these measurements a mistake of a millimeter is allowed. In scientific measurements only a half millimeter is allowed.

In measuring the distance between the zygomatic arches (bizygomatic diameter) the same calipers are employed and a similar method as in finding the length and width of head.

In fig. 90 is represented a small caliper rule for measuring the length of the ear. The flat and stationary end A of the instrument is placed so as to just touch the

superior border of the ear, and is held still by pressing the left thumb on the end of the stem, resting the other fingers upon the top of the head. The stem of the calipers is held parallel with the axis of the ear, the movable branch is pushed up till it just

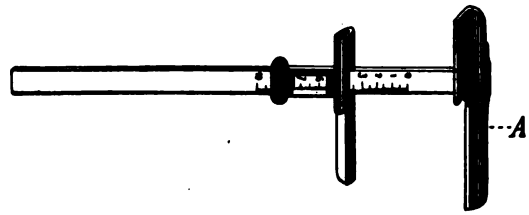

FIG. 90.—Small caliper rule.

touches the inferior extremity of the lobe, when the figure indicated upon the scale is read. Care should be taken that the pavilion of the ear is not depressed by either branch of the calipers.

The large caliper rule (fig. 91) is used in measuring the foot, middle and little fingers and the forearm.

For measuring the foot (fig. 91) the operator, with his subject in the position represented in fig. 92*a*, presses the fixed end of the caliper against the back of the

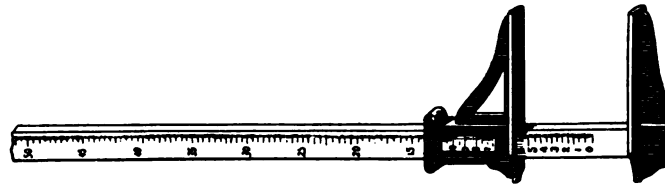

FIG. 91.—Large caliper rule.

heel, then he pushes down the movable end of the caliper until it touches the great toe, reading the distance indicated on the scale.

In measuring the middle finger (fig. 92*b*) the operator places it on the back of the rule, turning the finger to be measured into a position at right angles to the back of the hand.

To measure the forearm (fig. 92*c*) the shoulder of the subject should form an acute angle with it.

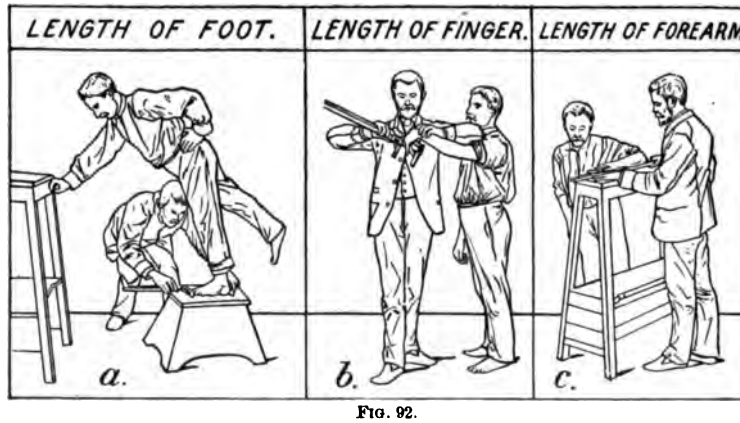

FIG. 92.

It is a common saying that two carpenters never measure a plank exactly the same. If one individual were measured seven times, there would probably be seven signalments, differing by very small quantities. These differences can be ignored

until they reach a certain point, after which they destroy the value of the measurement. The following table gives the limits of necessary approximation according to Bertillon:

TABLE 7.[1]

[In millimeters.]

	Approximation theoretically requisite (in + or in —).	Discrepancy beyond which grave error begins.	Mistakes of serious character beyond which non-identity can be declared.
Height	7	15	30
Arm reach	10	20	40
Trunk	7	15	30
Length of head	0.5	1	2
Width of head	0.5	1	2
Length of right ear	1	2	4
Width of right ear	1.5	3	6
Length of left foot	1.5	3	6
Length of left middle finger	0.5	1	2
Length of left little finger	0.75	2	3
Length of left forearm	1.5	3	6

[1] The Bertillon system of identification, p. 24.

PORTABLE CASE CONTAINING INSTRUMENTS FOR BERTILLON'S SYSTEM OF IDENTIFICATION.

1. Two-meter measure (in three sections).
2. One-meter rule.
3. One-half meter rule
4. Double decimeter.
5. Calipers for the head (fig. 88).
6. Sliding calipers for the ear (fig. 90).
7. Sliding calipers for the elbow (fig. 92 c).
8. Directing rod for the ear.
9. Scissors to cut finger nails.
10. Instrument to verify calipers.
11. Roller, tablet, and ink to take finger prints.
12. Signaletic instructions by A. Bertillon, 2 volumes.
13. Box to carry the instruments.

Maker of instruments, Collin, Paris.

XVIII.—A STUDY OF EMILE ZOLA AS ILLUSTRATING METHOD.

In order to illustrate a method of studying any individual, whether genius, criminal, or insane, normal or abnormal, we give an investigation of Emile Zola.

The study of any human being with the means at present in the hands of science would make a volume. Such an investigation of modern civilized man is one of the most recent methods of scientific and sociologic inquiry. It is paradoxical that man is the last object to be thoroughly studied by man. There is less definite knowledge of modern man than of uncivilized man; there is more definite knowledge about rocks and plants than about man, and though we have made sciences of the former, a science of human beings hardly exists.

The term "science" has been applied to sociology, criminology, and like studies, but they are only sciences by courtesy, and not in the rigid sense of the word; for until there has been a systematic study of large numbers of individual persons, it is difficult to see how sufficient knowledge can be established to constitute sociology a science. The instrumental investigation of man, as carried on at present, is simply a more precise method of procedure, presenting the effects of mental, moral, and physical forces upon the body, of many of which we are unconscious. Empirical methods of studying modern man are being undertaken in many countries, and thus we may come to have in the future an anthropology of the living as well as of the dead.

The most recent study, and perhaps the most thorough one ever made of an individual in society (a number have been made on criminals in prison[a]), is an investigation of Zola, conducted by a number of French specialists.[b]

A sociological study, if it is to be rigid, must be based primarily upon the investigation of the individual, who is the unit in society. It would seem therefore that there can be no scientific sociology without data gathered from investigations of large numbers of individuals in the social organism. Such a sociology does not exist, but many recent investigations show a tendency in this direction. It is a long and tedious road, for it means a patient study of the individual units, to find out what is common to most of them in their mental, moral, and physical development.

What, then, may be regarded important in the study of an individual? The answer to this question would go beyond the limits of this work; but the writer has endeavored in another work to give a practical answer so far as children are concerned.[c] As an illustration of the investigation of man, it may be of interest to take up the study of some modern man who has become prominent in the eyes of the world. Perhaps no more striking personality could be chosen than that of Zola.

Whatever may be said as to the ethical side of Zola's works, it is not the purpose of this inquiry to consider that question. It is simply with the man, his personality and work, that we are con-

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[a] See *L'Homme Criminel*, by Lombroso, and *Le Criminel-Type*, by the writer.

[b] Toulouse, Manouvrier, Bertillon, Bloch, Huchard, Joffry, Robin, Mofet, Serveaux, Bonnier, Henry, Philippe, Crepieux-Jamin, Passy, Galippe, and others.

[c] "Man and abnormal man," Senate Document No. 187, Fifty-eighth Congress, third session.

cerned. It may, however, be remarked incidentally that to judge of Zola's private life from his writings would be misleading, as is so often the case of those who take up subjects of a delicate or brutal nature. Many no doubt may have thought Zola to be a sensuous man, but a study of him will reveal quite an opposite character.

It seems natural to the public mind to attribute to a man the characteristics of his work. The surgeon, for instance, is called cruel, but there is perhaps no class of men who do more humane work. It has gone so far that, so to speak, if one studies an apple, he eventually may be called an apple.

In the study of the abnormalities and weaknesses of human nature, one may appear as not disapproving of them, because he simply describes the facts without referring to their ethical portent, but the main purpose of scientific method, so far as it can be applied to sociology, is to search out all the facts and present them just as they are. To discuss their value or to determine their detriment to society, is perhaps at present more in the province of ethics than of science.

ZOLA'S CHARACTER.

Ribot says that a true character is reducible to one mark, to one dominant tendency, which gives to it unity and stability. This idea of a genuine character applies to Zola, who has manifested all his life one predominant tendency: that is, he is an ambitious man conscious of his value, and endowed with an extraordinary tenacity. As he has always been, so he is still.

He has been accused of instability, because lately he appears to have changed his opinion of the social distinctions of the French Academy. But this is simply a change of method. His purpose has always been the same—that is, to occupy the first place. At the age of 40 he tried to make his ideas triumph, and it seemed to him good tactics to disdain the academy.

Later, his ideas were brought before the literary world, and then he wished to give them an official sanction. Zola also is a man who likes combat; it is his second nature. He was obliged, until his maturity, to struggle with the public for his literary ideas. Now he turns aside when one desires to talk about him. Toulouse says that if he should enter the academy he would probably regret it, in that he would not have this struggle to continue.

Zola is sensitive on account of his nervous impressionability, and active because of his strong physical constitution. He believes in work and is conscientious about the littlest things. He does not pose. He is not pessimistic. He believes in the virtue of work. He is opposed to all dilettanteism. Although hesitant, he is not skeptical. He always feels confident of the final result of his efforts long in advance, but he is full of apprehension at the moment of action. He has strong convictions, but he hesitates as to particular methods. Though naturally optimistic, he believes life is a failure; but his controlling impulse is to work and struggle with no other conscious purpose than action itself. Thus in true character there are seeming contradictions. He decides according to his needs in order to be tranquil; indecision is very painful to him. He is more timid than is generally supposed, and this is one reason for his living in retirement.

He is master of himself and diplomatic in spite of his nervousness, which sometimes overcomes him, but rarely makes him angry or violent. These characteristics, like all his passions, are employed toward a useful end. Zola considers it a great thing to succeed in life.

HIS WORK.

It may be worth while to mention some of the conditions that have influenced his æsthetic conceptions.

In college he instinctively turned toward the sciences, for he had a positive spirit, endowed with acute sensibilities. It was his faculty of observation and power of retaining a large number of details which inclined him toward empirical studies. His power of condensation was such that it was necessary for him to unite facts by bonds, true or false, in order to enable the reader to assimilate the facts. It is his instinct for order everywhere, even where there is none. This tendency in connection with his indomitable will caused him to produce a number of works, a sort of series constituting a whole. Thus at the commencement of his literary life he composed three poems—"Rodolpho," the infernal regions of love; "l'Aérienne," purgatory; and "Paolo," heaven. He entitled these three "The Amorous Comedy." The external influences, as shown in his literary education, were the occasion of his taking up romance. He had a powerful vision and a facility in rythmic phraseology; but, loving the observation of nature and the collecting of facts in natural science, he introduced these facts and scientific hypotheses into his writings. In his "Birth of Venus" he conforms to the recent facts of modern scientific medicine. This has been the tendency in his later works, such as "l'Histoire des Rougon-Macquart," which contains medical doctrines on heredity. In his recent work, "Fécondité," he is very plain spoken against the idea of small families, and however brutal his frankness, his intense earnestness can not be doubted.

Zola, after reading the results of these studies which he had permitted the scientists to make on him, says in brief:

I have read these pages, they have interested me much, and I willingly grant authority to publish them as authentic and true; for I have one desire in life, the truth, and one purpose, to make the most of truth. That which tends to truth can not but be excellent. I give this authority because I have never hidden anything; I have lived openly, spoken freely and without fear that which I believed to be good and useful. In the thousands of pages I have written, I have nothing to withdraw. If my works have certain vices, they may be good for something in serving as a lesson. This study of me is about one who has given his life to work and dedicated to this work all his physical, mental, and moral forces.

ANTECEDENTS.

It seems probable that Zola inherited from his parents and grandparents a vigorous physique, and from his mother a nervous gout or neuro-arthritic condition.

Zola was born at Paris on April 2, 1840. He was not nursed by his mother. He was weaned at the normal time. He did not have convulsions, though in his early infancy he was puny and easily alarmed. He began to walk at the usual age. He was backward in learning to talk; the letter "s" was pronounced like "t," and at present there is a trace of this defect. At the age of 2, Zola was at-

tacked with a violent fever, probably cerebral; for some hours he was thought to be dead. Between the ages of 6 and 7 he was affected with other troubles, about which little is known; they necessitated numerous blisters applied to both arms. After recovery he remained pale and delicate, but later he became strong, with a tendency to corpulency which has increased with age. The picture reproduced here is one taken of Zola when 6 years of age.

It shows him as a strong child, with a somewhat lymphatic look. The left eye is less open than the right, on account of an orbicular contraction which is still persistent.

The signs of puberty were manifested between 13 and 14, and his sexual instinct was always characterized by a certain timidity, as is often the case with neuropathic persons on account of inhibitory ideas.

Zola at 6 years.

Zola finished his studies at Paris at 18. At this time he had a severe attack of typhoid fever. The disease lasted six weeks; he was delirious in its acute stages. He remembers the intense heat in his feet and nausea and nightmare with sensations of balancing in space.

After he had abandoned his studies at the Lycée [a] in Paris, he had a life of material privations, so much so at times that he remained in bed in order to keep warm. This in connection with his intense intellectual activity afforded sufficient cause to give form to his congenital neurotic condition. His nervous troubles increased more and more; from the age of 20 to 40, there were intestinal pains; from 45 to 50 they took the form of cystitis and angina pectoris, with pains in the left arm. At 35 he ceased to smoke on account of his cardiac troubles. About this time morbid ideas made their appearance, but such ideas do not seem to have had any antecedents in his youth.

[a] Our grammar and high school, combined with our college, would correspond to the Lycée.

When Zola began to be successful, he was more at ease, his health was better; he increased in size and weight, so much so that the least exertion put him out of breath. He had symptoms of gastric dilatation, pyrosis, stomachal pains, and drowsiness after eating. He resolved on a dietetical regimen, which he continues in part today; never drinking anything during a meal, and never wine; during the day he takes a liter of tea. In eighteen months he lost 40 pounds. Since infancy, and especially since his attack of typhoid fever, his teeth have been bad; their condition was attributed to a general feebleness following upon his loss of flesh.

MENTAL EVOLUTION.

Zola was not a precocious child; he did not know how to read at 7. At this time his father and mother went to Aix. He remained there five years, from 7 to 12; during this time he did not learn very much, but enjoyed much freedom in outdoor recreation. As early as 10 he had his little love affairs; at 12 they became less superficial and more complicated, although purely mental. Notwithstanding this seeming precocity, women did not play a great rôle in his life as a young man. With his comrades he was reserved, not making acquaintances easily, but affectionate toward those who were his friends. This reserve was probably increased by his timidity; it is a permanent trait in his character.

At 12 he entered the eighth class at the Lycée in Aix; he was much behind in his studies, being at the foot of his class. But he went to work seriously and gained several prizes at the end of the year, and continued doing well in the subsequent years. He chose the scientific course as much on account of his repugnance to the dead languages, especially Greek, as by his attraction for natural science. He was a methodical and practical student, not lazy, not overenthusiastic. Zola was versed in what may be called the new art of the future, the art of knowing what to omit, to do only the indispensable; this was fundamental in his character.

When 18 he left Aix with his parents to return to Paris, where he entered the Lycée to continue his studies. But he felt somewhat behind his comrades; they also made sport of him on account of his provincial accent. He did not go with any of the students. Becoming discouraged and disgusted with classical training, he did not follow the course and did not do well in his other studies. After finishing philosophy he presented himself for the baccalaureate in science, but did not pass in German history and even failed in literature.

Now thrown upon the world with his mother, who had lost little by little all her resources, his natural disposition caused him to utilize the conditions of poverty, which in the lives of most men seem to be necessary to develop personality to its utmost possibility. He was forced to start out independently, with neither father nor brother with whom he could discuss his opinions; he was free to choose his own path; to this Zola attributes his pursuit of independent literature.

He assisted his mother in housekeeping, kept strict account of all the details and finances. He was obliged to live among the poor of Paris. It is interesting to note how he utilized those experiences in his writings.

Zola did not plan at first to live by his pen, for he was not conscious of his great literary talent. At 15 he felt a taste for literature and read with two friends a little of everything. The three enjoyed Hugo and Musset the most. They preferred long walks into the country rather than the pleasures of the theater or games. Zola could not choose any of the liberal professions because he was not a bachelor of arts; so, as he himself says, he was forced to take to literature, because there was nothing else to do. But literature pleased him and gradually he found that he could earn encugh to live by his writings.

METHOD OF WORK.

His plan of work has remained somewhat the same. In his novels he starts out from a general idea. He proposes, for instance, to study a social movement. He first obtains documents of information, takes notes himself, as he never employs a secretary. He generally studies the scene of action himself, and, on returning to his room, makes notes of what he has observed. Descriptions and physiognomies are hastily noted down, to serve later as reminders of the surroundings. Now he commences his novel. Up to this time he has been conscientious with the facts; now it is necessary to bring forth the ideas with his pen. He sits at his desk every morning and makes a rough sketch, which consists of a soliloquy which he carries on with himself. He considers the general idea which dominates; then by deduction he delineates his characters. He writes to think as others speak. Outside of his regular hours given to work he seeks nothing; no important idea comes to him. He is not like other writers, who work at any time. It is this intellectual economy that enables him not to think or trouble about his writings outside of his regular working hours. He seldom dreams about his work at night.

The moral of his novels is developed gradually. As he writes he enlarges little by little. He does not return or make corrections. His rough sketches are models. Usually his personages are delineated and deduced from general ideas, but some, however, are formed by induction. His memory furnishes him true types, or elements of imaginary ones. The result is his characters have a general rather than an individual nature.

After he has worked on his romance sufficiently to conclude his sketch, he describes the life of his characters. The type is pictured physically and morally. At last the conduct of each character is completed. Now Zola takes a directory and finds those names for his characters which conform best to their nature. It happens sometimes that his personages are like in name and profession to living personages. This has caused him trouble at times.

Zola forms the plan of his work by chapters, making a detailed summary of the course of action. As he writes, the ideas come and are recorded immediately. At the end of each chapter are notes on what inquiries to make or works to consult.

After this first plan is completed Zola begins to write his book; each chapter is arranged according to an artificial plan similar to the first; each part is thus prepared in advance, and its execution, with few changes, follows the original plan. Zola does not hurry in his work. He never writes till the sentence is complete in his mind; he does not change what he has written. His work could be

printed or translated as he writes it, showing his great facility in composition. While he prizes words and fineness of composition, he will nevertheless sacrifice all for clearness. He does not reread his manuscript, but sends it direct to the printer. He makes no corrections except in proof sheets.

For Zola there is no law of inspiration. He has written finely when very much fatigued. At other times, even after a refreshing sleep he has had no aptitude to write. He says the best time to write is when the brain appears empty, for the ideas come in less numbers, slowly and in order. While his best ideas often come easily, they are not in disorder and tumult, like to the inspiration in mania.

Delay and interruption hinder him much in his work. The more he advances, the more at ease he is. The weather does not affect him much, except that heat oppresses him. He always sits when he writes. He can not read while lying down, on account of cramps. He uses a heavy ivory penholder. He composes with ease the first hour; then his mind is not so clear, then his words may gradually become painful, and after three hours he is incapable of continuing. When he works with intensity he is very soon fatigued.

While Zola is at work there is little variation in his physical condition at the commencement; but when he begins to feel fatigued the respiration, and especially the pulse, are lessened. The amplitude of the capillary pulse and the arterial tension are diminished. The power of grasp, as measured by the dynamometer, is also less. These results are given in the table which follows. Six observations were made at prolonged intervals:

	Pulse.	Capillary pulse.	Arterial tension.	Respiration.	Strength of grasp.	
					Right hand.	Left hand.
					Kilos.	*Kilos.*
Before work	61	2/3m/m	1,000	20	43	37
After work	53	/3m/m	950	18	41	35

EXAMINATION OF THE EYES.

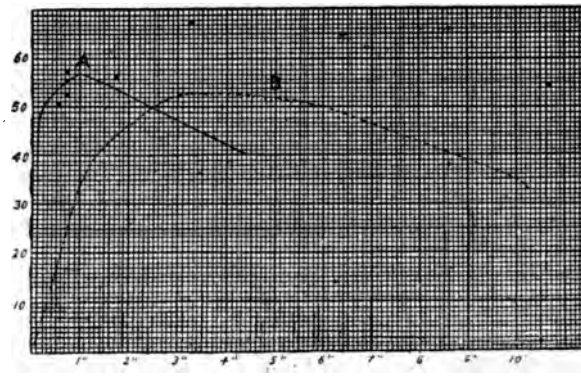
Zola was nearsighted at 16. In repose, when he looks away, the right eyebrow is lowered and the palpebral fissure[a] is narrower. One might think it to be due to ptosis,[b] but it is an orbicular contraction of long standing, closely related to myopia. It is a sort of permanent convulsive motion, and may be considered a neurophatic stigma.

The eyebrows are heavy, long, and of a dark chestnut color. The eyelashes are well arranged and sufficient in number for the upper eyelids, but less numerous on the lower lids. The eyelashes are relatively short when compared with the eyebrows. The palpebral fissure is almost horizontal. The white of the eye is slightly inflamed in the lower cul-de-sac. The iris is brown, with a slightly green-blue border. There is a slight degree of astigmatism.

[a] The slit between the eyelids.
[b] Drooping of the upper eyelid, due to paralysis or to thickening of the lid.

In the evening, in the dark, Zola has luminous sensations, but they occur only in places familiar to him. Whatever may be the cause of these phosphorescences, they are an abnormal sensorial excitation. To a certain extent they are under the control of his will. He can reproduce them, especially when lying on his bed in the evening.

The graphic study of Zola's hand with the dynamometer is represented in the following diagram:



Time, in seconds.

The figures at the bottom of the diagram give the number of seconds the hand grasp endures. Thus at the end of the first second Zola had reached his maximum strength of grasp, as shown by the curve *A*. The characteristics of this curve are a brisk movement upward, a constant but very short effort, and then a rapid decrease. Curve *B* represents the average for men of Zola's age.

MOVEMENTS OF THE FINGERS.

The movements of the fingers in a lateral direction, when the elbow is held firm, can be measured through the angles formed by trying to separate the fingers as much as possible.

The results of this experiment (expressed in degrees) with Zola are given in the table which follows:

	Right hand.	Left hand.
Angle between thumb and first finger	95	114
Angle between first finger and middle finger	54	45
Angle between middle finger and ring finger	42	45
Angle between ring finger and little finger	60	62

These figures are larger than the average. Especially is this true of the angle between the thumb and first finger, which generally does not exceed 90°. The movements of the thumb toward the other fingers, separately or together, are very easily executed.

VISUAL PERCEPTIONS.

Visual perception in Zola is weak on account of his myopia and astigmatism. But this does not necessarily affect the fineness of perception, as the following experiments show:

Test of length.—(*a*) He was asked to look at two lines of unequal length and tell the relation between the two lengths. One line was 9 centimeters long, the other 1 centimeter. His answer was as 1 to 10, being nearly correct.

(*b*) He was to divide a line by the eye into seven equal parts. The line was 10 centimeters in length; so each part was about 14 millimeters in length. The results of his divisions of the line were: First division, 12 millimeters; second division, 15 millimeters; third division, 13 millimeters. The error for each division was very small.

(*c*) Another experiment was to determine by the eye one-fourth and one-thirteenth of a given circumference. He took one-twelfth for one-fourth of the circumference, and one-eleventh for one-thirteenth.

PERCEPTIONS OF COLOR.

In the experiment for color, Zola looked for fifteen seconds at a cross drawn with blue pencil. Then he closed his eyes for six or eight seconds and saw black upon a gray background; that is, he saw the image of a color which is not usual for him to see. If, instead of closing his eyes, he gazed at a white paper, he saw the complementary color, which was orange.

The same experiment with a red cross produced a gray image on a black background with the eyes closed. When gazing on a white surface he saw the complementary color, light blue.

HEARING.

Certain peculiarities were found in his ears. The right ear has a slight sclerosis [a], affecting the retraction of the drum. This retraction is due to obstruction of the Eustachian tube. The left ear is normal. There is, however, at times slight buzzing in both ears, but more pronounced in the right ear. The hearing of the right ear is one-third below the normal. Auscultation [b] of the right ear and other experiments show that the internal part of the ear does not compensate for the errors due to the tension of the labyrinth. Over-exertion and congestion give rise to frequent vertigo. It would seem that some of the senses of Zola are in an abnormal state, somewhat near to that which is recognized in hallucinations.

Zola has a very poor ear for music. He learned to play the clarinet and piano a little in his youth, but soon gave them up. Lately he has become interested in music. Although he does not have the appreciation of musical intervals or harmony, he nevertheless has a very acute sense of rhythm, which is illustrated in the melody of his phrases. He has no colored hearing or analogous psychical trouble.

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[a] A hardening of tissues by formation of connective tissue.

[b] A method of distinguishing diseases by observing the sounds or an organ.

SMELL.

Odors play a conspicuous rôle in the life and writings of Zola. His sense of smell is very developed qualitatively, but not quantitatively.

To test his sense of smell, weak solutions of camphor, citron, and ionone (like violet) were prepared; then the solutions were gradually increased in strength until Zola distinguished the odor. He detected camphor in a solution of 12 parts camphor to 100,000 of alcohol; citron in a solution of 1 to 100,000. The results from ionone were uncertain.

The normal or average sensibility for camphor is 4 parts to 100,000; for citron 1 part to 200,000. Zola is therefore below the normal in quantitative sensibility to smell. It is rather by the memory of odors and their psychical use that he excels other persons. Certain odors remind him of objects with which they are connected.

TEST FOR FINENESS OF SMELL.

The qualitative test for smell was to arrange in order, according to increasing intensity of odor, 8 bottles. Each bottle contained a solution of camphor; each solution was ten times stronger than the one in the preceding bottle. Zola, after smelling the bottles, arranged them in the following order: 1, 2, 5, 4, 3, 6, 7, 8. With the exception of getting 5 and 3 wrong, he would have made a perfect test.

It did not require more than two minutes for Zola to complete this test.

TACTILE SENSIBILITIES.

Experiments were made upon Zola as follows:

Surface.—In order to test the perception of the surface of anything, the eyes were closed, and from two square cards of unlike surfaces Zola was to choose the larger one, without placing one upon the other. One card was 48 millimenters square, the other 5 centimeters square. He decided correctly.

Form and thickness.—Zola, with eyes closed, was ordered to touch two 10-centime pieces of money and to designate the piece which had been used most and the piece that was thickest. He chose the right pieces.

SENSIBILITY TO PRESSURE.

The sensibility to pressure on the skin was determined by an instrument consisting of a little rod, at the end of which was fastened a wild boar's bristle; at the end of this bristle was fastened a piece of paper 3 millimeters square. There were three such instruments. The bristle of one began to bend when pressed against the skin to the amount ranging from one-third to 1 milligram. This was pressed against the lower portion of the nose until the bristle bent, and was felt by Zola. It was not felt on any part of the external ear, cheek near the nose, temple, nor lower lip. The bristle of the second instrument bent at a pressure varying from 1 to 4 milligrams. This was felt on the eyelids, but not, for instance, upon the lower or upper side of the forearm. The third bristle would bend with a pressure from 10 to 50 milligrams. This was felt on the palm of the hand.

The sensibility to pressure seems to be more acute in Zola than in men in general.

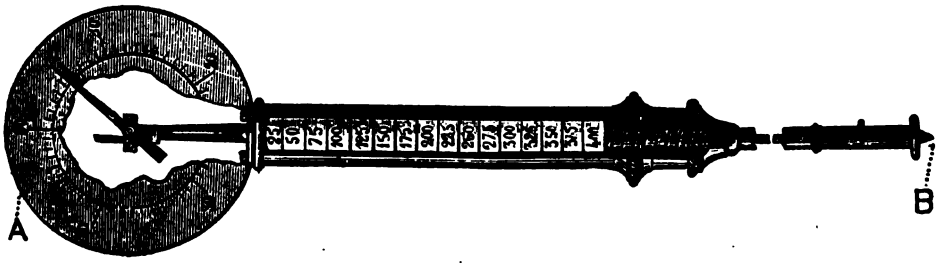
SENSIBILITY TO PAIN.

The sensibility to pain was measured by Chéron's algometer. The circular scale *A* measures in tenths of a millimeter how much the point *B* must be pressed into the skin until it is felt painful. The table below gives results of experiments on Zola:

Sensibility to pain measured by depth of penetration of a point into the skin.

	Tenths of a millimeter.
Palmar surface of third finger, right hand	12
Palmar surface of second finger, right hand	18
Dorsal surface of third finger, right hand	13
End of nose	15
Right cheek	17
Lower part of forehead	19
Neck, under the chin	25

Sensibility to pain is extremely developed in Zola. Thus the touch of a little stick of hard wood can produce in him a painful oppression in the chest. He can not wear anything that is tight; he can not even be tucked into bed.



PERCEPTION OF TIME.

These simple experiments were made to test his perception of time:

To say when forty seconds had expired.—Zola said they had passed after waiting twenty-five seconds. In a second experiment, in which he was allowed to count, he came within two seconds of being right, thinking the forty had expired after thirty-eight seconds.

Duration of different sensations.—Zola looked at three objects presented one after the other, each for an unknown length of time. The objects were a black inkstand (visual sensation), a red ribbon (color sensation), and a penholder at the end of which was fastened a revolving ball of paper (sensation of movement).

After submitting to this test, Zola said correctly that there was not a great difference in the duration of these three sensations. He was asked to name the objects in the order of decreasing duration. He answered: "Color, form, and movement."

This sensation of color seems to have been more intense and so appeared longer. His instinct in colors is shown in descriptions in his writings.

ASSOCIATION OF IDEAS.

For making experiments in the association of ideas, a variety of words was chosen. The concrete words embraced names of things and living beings as minerals, vegetables, animals, natural phenomena, etc. Among the abstract words were names for general ideas, metaphysical conceptions, sentiments, etc.

The words were so arranged that no associations might be suggested between them which might be due to the arrangement itself. The words were written on a separate piece of paper and were read to Zola.

As illustrations, we give some of the words in the list below. Those in italics were given to Zola to read; those in roman letters were read to him orally. The images or ideas suggested are placed opposite the words. When the response was not immediate, dotted lines were used to indicate it. The following are the abbreviations given after the responses: Id., idea; V. im., visual image; Im. a., auditive image; Im. op., olfactory image; M. simply, a word.

In conducting these experiments, Zola was told on reading or hearing a word to immediately give the first idea that came to his mind.

There were 155 words in all, a number of which are given here:

Words and images or ideas suggested.

Water, canals (Id.).	Friday, superstition (Id.).
Leaf, tree (Id.).	Fear, thunder (Id.).
Thunder, painful emotion.[a]	Five.
Paris, his rooms (v. Im.).	Alcohol, alcoholism (Id.).
Red, wild poppy (v. Im.).	Patriotism, Tzar (Id.).
Sound, piano (v. Id.).	Women, adoration (Id.).
Silk, a skein of colored silk (v. Im.).	God, infinite (Id.).
Sour, vinegar (M.).	Hunting horn, distant sound (Id. a.).
July, heat (disagreeable idea).	Infinite, painful emotion, fear.
Heart, heart disease (Id.).	Rome, Madame Zola, who was there.
France, the reception of the Tzar (Id.).	Struggle, his life of struggle (Id.).
Literature (M.).	Polemics, his life of struggle (Id.).
Heat, (disagreeable sensation).	

RESULTS OF EXPERIMENTS.

Of the words seen, 57 per cent gave images, and 25 per cent ideas. Of the words heard, 48 per cent suggested images and 33 per cent ideas. That is, the written words, as seen, gave rise to more vivid memories or images than the words read and heard; these last gave less images and more ideas.

In all, there were 91 images, 43 ideas, 15 words, 5 emotions, and 1 without any result. The visual images predominated. The ideas or images that were agreeable or disagreeable were classed under emotions, as "thunder" (fear), "heat" (disagreeable sensation), and "infinite" (painful emotion, fear).

There were in all 95 concrete words and these suggested 74 images (78 per cent); 17 ideas, 3 words, etc. The remaining 60 abstract words gave rise to 17 images (28 per cent); 26 ideas, 12 words, etc. Thus the images or vivified memories are much closer connected with

[a] Zola had great fear of thunder in his infancy, which still influences him.

concrete than with abstract words; abstract words suggest more ideas. The associations were easily made by Zola; they often concerned his actual preoccupation. It was the piano before him that was suggested by the word "sound;" it was the dog at his feet, the River Seine to be seen at his window.

The words of combat or struggle accord with Zola's life and his love for force, so well illustrated in his writings. Thus the word "chest" brought forth the image of a large and handsome man; the word "muscle" that of a fine muscle standing out on the arm.

Zola hesitated with 14 abstract words out of 60, in giving associations. This difficulty, however, is usual in this experiment.

The word "knife" evoked at once a feeling of repulsion, which was an involuntary imagination. His voluntary imagination can be studied in his novels. Odors were imagined with more intensity than colors. Almost all the names of color called forth the image of the corresponding color. In order to test immediate verbal imagination the following experiments of Binet and Henry were made:

(*a*) To immediately construct a phrase with the substantives inkstand, tree, horse, Zola answered: "The horse is afraid of the tree—this tree."

(*b*) To immediately construct a phrase with the words work, number, space. In the first seance Zola thought of nothing; in a second seance he said, "What infinite work in space that evolution continues stars without number."

(*c*) The same experiment with the nouns stone, iron, fire; Zola wrote, "I have often seen the stroke of iron make sparks fly from the stones."

It will be observed that certain words, especially the first in the series, do not interest Zola, for he either can not finish a phrase or he simplifies it. Abstract words make him hesitate; but words that excite his interest in literature and man cause him to form phrases at once.

SUGGESTIBILITY.

Zola is very little suggestible. The following experiment will illustrate it: Three bottles were placed before him; they were supposed to contain odors, but two had no odor and one a very slight odor. The experiment was varied and made at different times and under different circumstances, but Zola was never deceived into imagining odors in the other bottles.

GENERAL PHYSICAL CHARACTERISTICS.

Zola is now 57 years of age. He is below medium stature and of robust appearance. The chest is large, the shoulders high and narrow, the muscles are fairly developed, although he exercises little. The skin is white and wrinkled in places; his hair and beard were dark, but to-day they are gray; the head and face are large, the features are accentuated; his look is searching, but rendered somewhat vague by nearsightedness. In general his physiognomy expresses continuous reflection of a serious nature. His voice is good, but the final letters are sometimes uttered in falsetto.

ANTHROPOLOGICAL EXAMINATION.

Before giving some of the results of these investigations in detail, we may ask as to the utility of so many minute measurements.

It is true that in the modern psychophysical and anthropological mode of inquiry there is a danger of making too fine distinctions, such as insisting on half millimeters, or valuing too much a difference of a few thousandths of a second, or of massing together a large number of facts, which like a pile of bricks have no definite relation to each other. But new lines of study require more detail. It is better to have too many facts than too few; for by leaving out data in a preliminary line of inquiry we assume that we know in advance what material will be important and what not important, and thus exclude facts for theoretical reasons, allowing presuppositions undue influence. If we knew beforehand what was of most value, the investigation might be superfluous.

Portraits of Zola at 57 years.

The utilitarian objection to empirical inquiry fails to understand the foundation of all love of knowledge. It is frequently asked, what is the use of this or that experiment, "Will any good come out of it?" "Will any evils of society be lessened?" etc. It may be answered that if sociological evils are to be remedied the first step is to find out their causes definitely, and experimental investigation is one of the best methods. But the primary idea of science is truth for its own sake, and under the inspiration of this ideal most of the discoveries of utility to humanity have been made. In all experimental work much may be done that subsequently is seen to have been unnecessary. But often the real significance of a fact can not be known until other facts have been brought to light.

We give some of the anthropometrical measurements and descriptions made by Bertillon, the inventor of the "Bertillon System of

Identification," and by Manouvrier, the distinguished physical anthropologist of France:

ANTHROPOMETRICAL.

Height, 1 m. 705 mm.; sitting height, 890 mm.; arm reach, 1 m. 770 mm.; maximum length of head, 191 mm.; maximum width of head, 156 mm.; cephalic index, 81 mm.; length of right ear, 69 mm.; width of right ear, 31 mm.; length of left foot, 262 mm.; length of right foot, 269 mm.; vertical diameter of head, 143 mm.; bizygomatic diameter of head, 146 mm.; chest girth, 1 m. 60 mm.; waist girth, 1 m. 70 mm.; weight, 160 pounds.

Forehead: Supercilliary arches medium; inclination medium; height and length above average; several horizontal wrinkles.

Color of left iris: Aureola chestnut, periphery greenish slate.

Nose: Root of medium depth; ridge rectilinear; base slightly elevated; medium in height and prominence; tip bilobed; nostrils wide.

Lips: Nasolabial height medium; upper lip prominent, medium thick.

Chin: Inclination prominent; height low.

Mouth: Medium in size; corners lowered.

Right ear: Original ridge medium; superior and posterior ridge large.

Lobe: Contour square; slightly adherent to cheek; height large.

Anti-tragus: Inclination oblique; profile rectilinear; reversion (turning over) intermediate; small in size.

Folds: Inferior concave; superior intermediate; rectilinear in form.

Left ear: Original ridge small; superior ridge medium; posterior ridge large.

Lobe: Contour square, slightly adherent to cheek; height large.

Antitragus: Inclination oblique; profile rectilinear; reversion (turning over) intermediate; small in size.

Folds: Inferior concave; superior intermediate; rectilinear in form.

Eyelids: Palpebral fissure or slit medium; superior left one uncovered.

Hair: Chestnut; insertion in points.

Beard: Light chestnut, turning to gray.

PHYSICAL PECULIARITIES.

Zola is a little below the average in height and sitting height, but in arm reach he is about the average. His head is more than average in size; but this would not necessarily mean a larger brain, on account of the thickness of the bones of the cranium being unknown.

The antitragus of the ears is almost absent and the border adheres to the cheek. The upper left eyelid is somewhat low. The wrinkles of the forehead are very old, existing as early as the age of six; so that at that time he was called serious or grave. Manouvrier regards these wrinkles as a sign of emotivity. Wrinkles in London school children were shown by Warner[a] to indicate dulness. In examining school children in this country the writer has found this to be a general truth, except where children are nearsighted, in which case the wrinkles may be due to the strain of the eyes. Wrinkles may be normal in mature people, but not in children. One cause of the wrinkles may be this: A dull child finding its lessons difficult, must make more of an effort or strain, which is expressed by wrinkles on the forehead; repetition gives these wrinkles permanence in early life. Zola's nearsightedness may account for the wrinkles in his childhood. There are vertical wrinkles in front of the ear, especially on the left side; Zola hears best on this side. Toulouse thinks this might indicate more active movements in connection with hearing.

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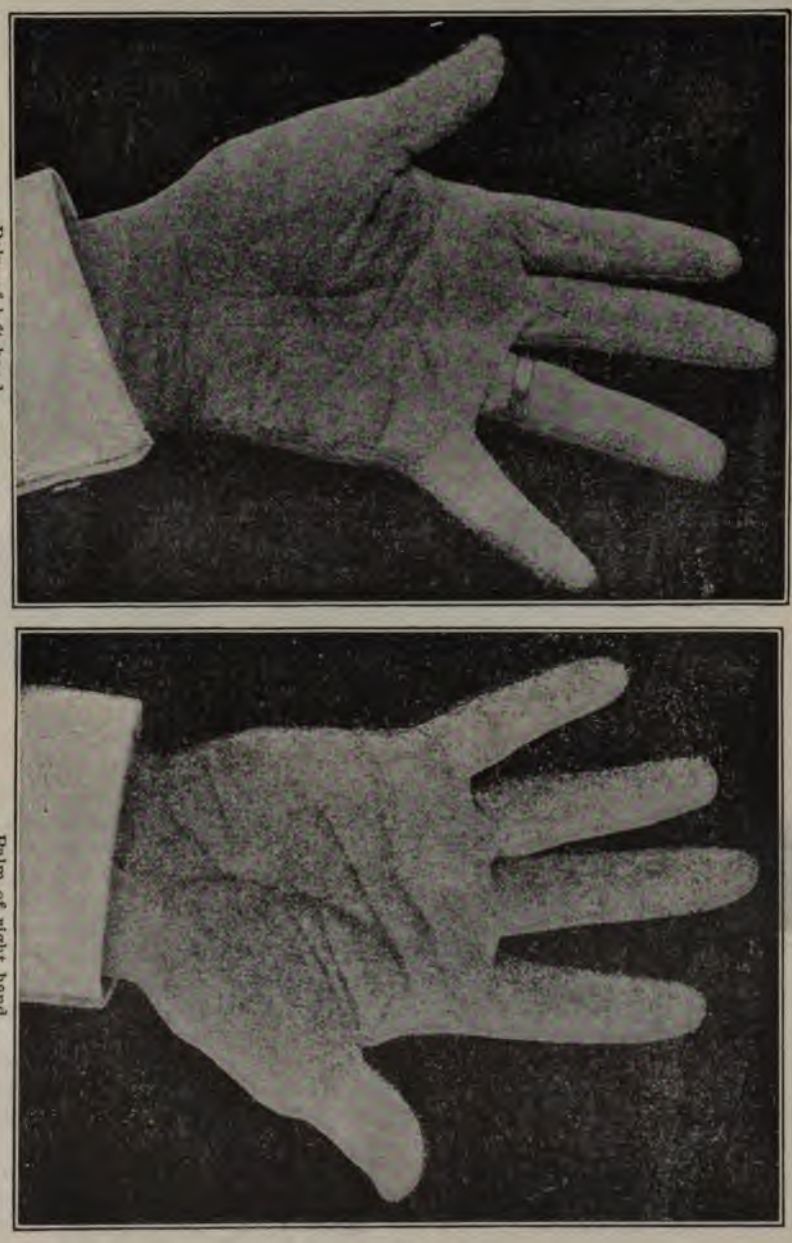
[a] Warner, Francis. "On Mental Condition of 50,000 London School Children." See Report of U. S. Commissioner of Education 1890–1891, vol. 2, pp. 1081–1138.

When in a state of repose and looking at a distance, the left eyebrow is notably lowered; this is probably due to an orbicular contraction of long standing and can be considered as a neuropathic stigma.



FORM OF ZOLA'S HANDS.

His hands are 112 millimeters in breadth and 110 millimeters in length; they are broad rather than long, emphasizing the human type as distinguished from the simian. The two median folds in the

palms unite at their radial extremities. When the hand is flat and the thumb rests against the index finger, the muscular extension into the interosseous space is greatly increased. This indicates, according to Féré, a great possibility of movement. The finger nails are small and round.

FINGER IMPRINTS.

The upper column in the figure represents the imprints of the left hand, the lower column those of the right hand. The imprints of the thumbs begin at the extreme left and follow in succession, ending with those of the little fingers.

Finger imprints.

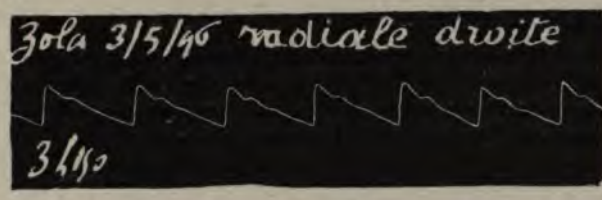
In accordance with the general principle that complexity of function and design are parallel, Féré finds among the degenerate the most simple forms as that of an arch; this arch he finds in the imprint of Zola's middle left finger. But the idea has not been confirmed as yet by other investigators.

The imprints of the left-hand fingers, especially the three last, are not so clear, the skin at the ends being very wrinkled; the little hairs are almost effaced. This may be because the fingers are used less; for age effects immediately those functions the least exercised. Galton affirms that in all his investigations he has not as yet found any relation between finger imprints and moral or other characteristics.

Toulouse finds Zola, from an anatomical point of view, free from any notable defects which would make him pass beyond the limits of normal variation.

CIRCULATORY ORGANS.

The circulatory organs are sound; the pulse slow (65); the form of pulse taken by the sphygmograph of Marey is here given:



Pulse, traced by sphygmograph, reduced one-ninth in size.

The line of ascension is straight, the line of descension is undulated; the slight polyerotism,[a] or wave-like line, indicates great arterial elasticity. Arterial pressure is strong, being about 950 grams. Sometimes there are pains in the thoracic region on the left with constrictive sensations and irradiation in the left arm; this angina symptom alternates with crises of false systitis.

There is a constant capillary pulse, indicated thus:

Capillary pulse from plethismograph of Hallion and Compte.

RESPIRATION.

Zola was rarely subject to colds before forty-five, but since then he has become more susceptible. His respiration is calm, regular, and of normal frequence, about eighteen a minute. The movement of the chest in respiration as traced by the pneumograph is here given:

Respiration traced by pneumograph, reduced three-fifths.

The ascending line represents inspiration; it is shorter and straighter than the descending line, which represents expiration.

The writer has endeavored to show experimentally the effects of emotional and mental states on the respiration, and the result would seem to indicate that every thought and feeling affects the respiration, the sensibilities, and circulation. The object of such investigation is to measure these effects, however slight they may be. By making

[a] A condition of secondary waves or beats of the heart.

such studies on large numbers of persons, it may be possible to gain more definite knowledge of the causes of our mental, moral, and emotional experiences in life.

DIGESTIVE APPARATUS.

The teeth are bad. The alveolar arch is not normal. The digestive functions have been troublesome for a long time, but of late they have very much improved by a special regimen; at 9 a. m. a piece of dry bread without drink; at 1 p. m. a light breakfast without liquid or food containing starch; at 5 p. m. some cake with tea; at 7.30 p. m. a light dinner; at 10 p. m. two cups of tea; no wine. When riding bicycle Zola takes a great deal of tea, as much as 1 liter per day. In this way he has kept his corpulency in check. To hold one's self to such a regimen indicates great tenacity.

MUSCULAR SYSTEM.

The muscles are well developed, although little exercised; but lately Zola has taken moderate exercise on a bicycle. When resting he has a sensation of numbness; there is also a trembling of the fingers in fine movements; in voluntary movements it is exaggerated, so that he sometimes turns a tumbler over when trying to drink from it. This phase of his nervous troubles is still more exaggerated by emotion, so that he has not been able to read a public address.

The strength of his right-hand grasp, as indicated by the dynamometer, is 42 kilograms; that of his left hand, 36 kilograms. This power of grasp seems to vary under the influence of certain excitation. One day when he felt dejected the power of grasp of both hands was at the maximum. It is well known how music affects the power of hand grasp.

The functions of hand and arm are considered of much importance because they appear in close relation with the brain.

NERVOUS SYSTEM.

The sensibility of the skin is very developed. This may be due in part to the abundance of little hairs on the skin, which extend much beyond the normal with Zola. The sensitiveness of heat and cold is very great. Reflex sensibility is normal, but tendon reflexes are somewhat exaggerated. The muscular sense seems normal.

When standing there is a slight oscillation to the right, if the eyes are closed and the feet placed together. Zola is troubled with vertigo. He is exceedingly sensitive to pain.

Sleep, which is a general function of the nervous system, is good, yet after seven or eight hours of rest he awakes with a feeling of fatigue, with cramps in the whole body, and with a sensation of painful lassitude.

Zola's nervous system in its entirety presents cardiac spasms, cramps, pollakiura, trembling, etc. It is notably subject to crises of pain, which date from the age of 20. From this time on to 40 there were periods of nervous colic. From 45 to 50 these crises took the form of angina pectoris, of acute cystitis, and of articular rheumatisms. At present these troubles are less, but they are replaced by a state of almost constant feebleness and irritability. Sometimes

gastric troubles are the occasion of nervous manifestations, but at present it is intellectual or muscular effort which provokes them; sometimes the slightest thing is sufficient to awake them, such as a too close fitting garment; thus the squeezing in a crowd once provoked a crisis of agony with false angina pectoris; so the pricking of his finger has been felt in his arm for several hours.

There exists then in Zola a certain lack of nervous equilibrium, an exaggerated morbid emotivity, which under the influence of slight excitations, causes disordered and painful reactions.

This condition frequently accompanies intellectual superiority, develops with exercise of brain and mind, and tends gradually to increase the lack of nervous equilibrium.

PSYCHOPHYSICAL EXAMINATION.

Psychophysical examination is difficult with a neuropathic subject. Mental experiments or tests are subject to many variations, their results are at best approximate, yet within certain limits they can indicate tendencies in a personality that may be as valuable to know as any physical data. Another difficulty is that many of the tests have not been made on a sufficient number of persons to form any basis for comparison. Such results will be of more value in the future, when the study of living men shall have reached a more developed stage.

SENSATION AND PERCEPTION.

Sensation from one point of view is physiological, from another standpoint it is psychical; that is, it is perception. The tactile perceptions, like the sensations, are generally acute in Zola. Thus tests were made in the perception of surface, of form, of thickness, and of weight. Visual perceptions are feeble, owing to near-sightedness; they consisted in distinguishing length, surface, muscular movements, and color.

In perceptions of hearing Zola shows a very poor musical ear. He has neither colored audition nor any psychical analogue. Perceptions of smell are not quantitative, but in comparing and distinguishing odors he shows the finest precision. One of his distractions is to tell what he is to have for dinner; he can distinguish tomatoes, chicken, mutton, and different species of fish. His memory of olfactory sensations is very strong. Odors play a prominent rôle in his writings as well as his life. There is nothing peculiar in his perception of taste, of time, or of space.

The nature of his mental images is auditive—that is, in the art of verbal thinking he tends to make use of the auditive images of the word.

In speaking he has no qualities of an oratorical nature; he is very nervous and timid, and emotion inhibits or paralyzes him. He also has a poor memory of words, phrases, or constructions. He has never been able to learn another language. He has tried to commit his discourses to memory, but he has only increased his difficulties.

His handwriting varies very much. In copies the small letters are normal, inclined to the right and not higher than 2 millimeters; in his note book the letters reach 5 millimeters in height and vary continually in inclination, corresponding to the intensity of his thought.

MEMORY.

Zola remembers one or two events that occurred when he was 2 years old. As a boy he had an excellent memory. After his third year his memory became less reliable. Tests were made on his tactile and visual sensations, on his memory of objects, of form, of surface, color, movement, of ideas, of letters, of words, phrases, and figures.

As a result of these experiments in memory his involuntary memory is much more feeble than his voluntary memory. The degree of his power of retention depends much upon the utility of the thing to be remembered, thus enabling him to employ his memory to the best advantage and with the least loss. He uses auditive images rather than visual images. While sight is the door to memory, the ear fixes and reveals memory. Zola is a visualist for objects and an auditive for words.

ATTENTION.

Concentration of attention with Zola is not long. He does not study with success longer than three hours at a time; during most of this time he can hold his attention to work in hand without wandering on subjects that have nothing to do with the task before him. While, then, his attention is short, it is intense and is like to his muscular effort.

He easily becomes oblivious to all surroundings when studying. Thus when coming down to breakfast he finds that the bell has been ringing many times, the dog barking a long time, and that the weather has suddenly changed. At table, in the street, or in an ordinary conversation his power of attention is small; he is often absorbed in reflection, meeting acquaintances, apparently looking at them and yet not recognizing them. His faculty of observation is very much developed, in addition to being greatly exercised.

REACTION TIME.

His reaction time is one hundred and thirty-six thousandths of a second, which is less than the general average, but its extreme regularity indicates power of attention and assimilation. The motor reactions are shorter than the sensorial. The reactions of choice are little shorter than the normal.

IDEAS OF ZOLA.

His knowledge is extensive if not profound; he was attracted to the natural and medical sciences.

Genius according to Zola is not rarity nor perfection; its three characteristics are creation of being, power, and fecundity; genius reproduces nature with intensity.

Right is the application of justice. There is an antithesis between natural law and written law, which is a bad application of justice to society.

Justice is a social idea; it does not exist in nature; equality is not in the nature of things.

Woman has less equilibrium and initiative than man and in general she is inferior to man; yet in little things she is superior to her husband.

Zola does not respond to metaphysical ideas; he is a positivist; yet he believes in complete annihilation after death. God for him is a naïve hypothesis and all affirmations of religious dogma seem inconsistent and without common sense.

He bases morality on observation of moral laws. He has a pagan conception of life; that which is healthful does not injure; that which is outside of nature is incomprehensible. His ideas of order and method are very developed; he is a slave to them; they extend from the care of his toilet to the composition of his works. Everything has its place in his apartment; disorder pains him; his study table is so well arranged that one would not know that he used it; he classifies his work in envelopes. He keeps the letters he receives, although the most of them are of no use to him.

EMOTIVITY.

While physically Zola is somewhat abnormal in his sensations, yet not so in all his manifestations of sensibility. The simple emotions of joy and sadness are intense. Health, self-control, and an easy functioning of his organism give him great pleasure. Moral pain depresses him, but without causing violent reaction. His sympathy is with natural things; it is not quickly aroused. He does not make acquaintances easily.

As to his taste, there are three things most beautiful—youth, health, and goodness. He loves jewels and steam engines; that is, the fineness and solidity of labor. He loves city scenes and landscapes. In the world of colors he prefers red, yellow, and green, and faded shades. In odors he prefers the natural ones, the flowers, but never artificial ones. He likes sweet things.

Fear is the principal emotion in him connected with the instinct of self-preservation. He has not much fear of the bicycle, but he does fear to ride through a forest at night. He has no fear of dying suddenly. He has no fear of being buried alive, yet sometimes when in a tunnel on a railroad train he has been beset with the idea of the two ends of the tunnel falling in and burying him.

He never has had any ideas of suicide. He sometimes becomes angry at illogical things. The motives which provoke him most easily are not, as with the majority of men, personal assaults; but any injury to his moral feeling, especially if he is accused of injustice, arouses him.

Zola likes the young woman; that which he likes in her most is freshness, health, physical and moral harmony, gentleness, and charm; he attaches no importance to style of dress. He has no fetishisms in love. In his jealousies he retires within himself, reacting little and suffering in silence.

SENTIMENTS.

Zola does not have the religious sentiment, although he is given to certain superstitions. His æsthetical preferences are in literature; he is fond of Balzac, as creator of beings, and Flaubert as writer. The modern theater displeases him; he prefers a tragedy of Racine

or Corneille. In music he does not like symphony, which he does not understand, but he likes opera, but wants to hear the words, without which all music seems obscure to him. He prefers simple airs, but operetta and café concerts disgust him.

Zola is domestic; his indulgencies are restrained. He does not like any game of chance; neither cards nor billiards interest him. He likes chess, but it fatigues him very much.

MORBID IDEAS.

Zola's tendency for order is so strong that it sometimes reaches a morbid stage, for it provokes a certain suffering in cases of disorder.

From about the age of 30 certain morbid ideas have developed, but they do not cause him pain when not satisfied; he lets them run into "their manias," as he says, and he is then contented. The idea of doubt is one; he is always in fear of not being able to do his daily task, or of being incapable of completing a book. He never rereads his novels for fear of making bad discoveries; he has no confidence in himself in this respect.

Another morbid idea is arithmetical mania. He says this is a result of his instinct for order. When in the street he counts the gas jets, the number of doors, and especially the number of hacks. In his home he counts the steps of the staircases, the different things on his bureau; he must touch the same pieces of furniture a certain number of times before he goes to sleep.

From this desire to count arise superstitions. Certain numbers have a bad influence for him; if by adding to the number of a hack he obtains a superstitious number, he will not hire the hack; or if he is obliged to, he fears some evil will befall him, as not to succeed in the errand he is upon. For some time "3" was a good number; to-day "7" reassures him. Thus in the night he opens his eyes seven times to prove that he is not going to die. But the number 17, which reminds him of an important date that fate has willed, disturbs him.

But Zola has superstitious ideas outside of his arithmetical mania. He accomplishes certain things from fear if he should not disagreeable experiences would fall to his lot.

Zola appreciates the absurd side of these morbid ideas, which nevertheless are accompanied by slight emotions. He can resist these impulses with success, and it costs him neither struggle nor pain. It is curious how little morbid ideas affect his mental equilibrium.

LITERARY EXPERIMENT.

Passages were read to Zola from a number of well-known authors, as Balzac, Pascal, Molière, Rousseau, and Hugo, and he did not recognize the author in a single instance. Thus a great writer may read very little, both for want of time and through fear that he might lose his individuality in style and thought.

Extensive knowledge and culture are not necessary to originality of thought.

The intellectual sentiment that causes Zola to work is not a pleasure, but the necessity of accomplishing the task he has imposed upon himself.

The emotional language of Zola is feeble; he can not imitate a voice or gesture, and he knows that he could not be an actor.

WILL.

His chief characteristic is tenacity. When at work and a difficulty arises he does not stop; he does not get up to distract his mind; he remains at his table; difficulties develop him. His acts are guided more by reason than sentiment. When pushed by passion he reflects, weighs the consequences, and he is conscious of being master of himself. He never feels constrained in spite of himself to commit an act which he would deem unjust. He does not comprehend the violent passions of Hugot in fiction, nor those feelings which pushed General Boulanger to suicide. Zola is a type of mind that has contributed to the hypothesis that man is a master of his actions.

ZOLA A NEUROPATH.

As to the relation of intellectuality to neuropathy comparatively little is positively known. Zola is neither epileptic nor hysterical, nor is there the least sign of mental alienation. Although he has many nervous troubles, the term "degeneracy" does not apply to him wholly. Magnan classes him among those degenerates who, though possessing brilliant faculties, have more or less mental defects. It is true, as we have seen, that Zola has orbicular contraction, cardiac spasms, thoracic cramps, false angina pectoris, sensory hyperæsthesia, obsessions, and impulsive ideas; his emotivity is defective, and certain of his ideas are morbid, but all this is not sufficient to affect in any appreciable manner his intellectual processes. His strong and harmonious constitution give him immunity; his intellect is not contaminated. Toulouse says he has never seen an obsessed or impulsive person who was so well balanced.

Yet Zola is a neuropath; that is, a man whose nervous system is painful. Heredity seems to have caused this tendency and constant intellectual work to have affected the health of his nervous tissues. Now, it is a question whether this neuropathical condition is not an excitation that has given rise to the intellectual ability of Zola. Whether a diseased nervous system is a necessary cause of great talent or genius is quite another question; yet pathological facts have been such constant concomitants of great talent and genius that the relation seems to be more than a temporal one and suggests the idea of cause and effect.

In brief, the qualities of Zola are fineness and exactitude of perception, clearness of conception, power of attention, sureness in judgment, sense of order, power of coordination, extraordinary tenacity of effort, and above all a great practical utilitarian sense. With these qualifications he would have succeeded in whatever path in life he might have chosen.

BIBLIOGRAPHY.

Toulouse, E. Emile Zola. Paris, 1896.—Toulouse, E. Les causes de la folie, 1896. Binet et Jacques Passy. Etudes de psychologie sur les auteurs dramatiques. Année psychologique, 1894–1895, page 61.—Lombroso, C. L'Homme de génie, 1896. The Man of Genius, in English.—Moreau (de Tours). La psychologie morbide dans ses rapports avec la philosophie de l'histoire, 1859.—Réveillé-Parise. Physiologie des hommes livré aux travaux de l'esprit, 1848.—Manouvrier. Essai sur les qualités intellectuelles considerées en function de la supériorité cérébrale quantative. Revue de l'Ecole d'anthrop, Tome

IV, Mars, 1894.—Ribot. L'hérédité psychologique. 1873.—Galton. Hereditary Genius.—Lemaitre, Jules. Nos contemporains.—MacDonald, A. Abnormal Man.—Beaunis. Nouveaux élements de physiologie humaine, 1888, t, 11, p. 584.—Bertillon, A. Signaletic Instructions; Anthropo metrical identification, Chicago, 1896.—Binet, A., et Passy, J. Études de psychologie sur les auteurs dramatiques. Année psychologique (1894), 1895.—Bloch, A. M. Archives de physiologie, 1891, No. 2, p. 322.—Crépieux-Jamin. L'Ecriture et le Caractére.—Féré. Sensation et movement, 1887. Les empreintes des doigts et des orteils. Journal de l'anatomie et de la physiologie, 1893, p. 223. La famille névropathique, 1894.—Galton. Hereditary Genius. London, 1892.—Henry, Ch. Sur un dynamomètre de puissance, etc. L'Intermédiaire des Biologistes. Paris—Joffroy. Les fugues. Paris, 1896.—Laupauze, Henry. Emile Zola et son œuvre. Rev. Encyclopédique. 1er. Sept. 1894.—Lélut. Du démon de Socrate, 1836.—Lemaitre, Jules. Nos contemporains.—Lombroso, C. L'Homme de génie, Paris, 1896. (In English "Man of Genius," New York, 1891.)—MacDonald, A. Man and Abnormal Man.—Senate Document 187, 58th Congress, 3d session. Manouvrier, L. Les aptitudes et les actes, 1891 (dans Société d'anthropologie).—Monreau (de Tours). La psychologie morbide, 1869.—Passy, J. Revue générale sur les sensation olfactives. Année psychologique, 1896, p. 378.—Réveillé-Parise. Physiologie des hommes livrés aux travaux de l'esprit. 1843.—Ribot. L'hérédité psychologique, 1873. La psychologie des sentiments, 1896.—Toulouse Ed. Émil Zola, Paris, 1896. Les causes de la folie, 1896.—Varigny (de), H. Les empreintes digitales d'après Galton, Rev. Scientifique, 1891, XVII, p. 557.

XIX.—MORE PLEASURE THAN PAIN IN THE WORLD.

In a study of crime, pauperism, defectiveness, and other pathosocial evils the question frequently arises as to whether there is more pleasure than pain in the world. If all the pleasurable and all the painful thoughts, feelings, and sensations of each individual in the world were added in separate columns and the two results compared, this would give an approximate answer to the question. But manifestly such a task would be impossible, even though it were applied to so limited a number of persons as inhabit one city of the world. Yet when sociology, and especially social pathology, become sciences in the rigid sense not only questions as to crime and other evils may find solution, but related matters of more general interest may be determined.

For the mere purpose of illustration and suggestion, a table is presented below giving the record of a Government clerk for one day, expressed in number of pleasant or unpleasant feelings or states of consciousness. It shows that as near as it was possible to calculate that the clerk experienced 581 pleasant states of consciousness and 158 unpleasant ones.

It should be remembered that the great majority of states of consciousness are not noted, for they are more or less indifferent from the point of view of pleasure and pain.

While this is a record of only one actual day, it perhaps approximates an average day for a Government clerk. There is no attempt here to distinguish between mental and physical pleasures; all are treated simply as states of consciousness. The number and, to a certain extent, intensity of pleasant or unpleasant states of consciousness are sought to be expressed in the figures. If the life of a Government employee be considered as an average, it seems quite probable that there is much more pleasure in the world than pain.

A Government clerk's day.

		States of consciousness.	
		Pleasant.	Unpleasant.
7 to 8 a. m.	Pleasant feelings of rest after waking, etc.	15	
	Unpleasant thoughts of getting up		8
	Unpleasant feelings in the act of getting up		6
	Brushing of hair, washing of face, cleaning of teeth, etc., more or less indifferent in causing pleasure or pain; unpleasant sensations while commencing cool bath.		12
	Gradually decreasing unpleasant sensations as bath progresses.		7
	Rubbing with towel and consequent pleasant sensations of reaction and glow.	25	
	Pleasant reaction continued while dressing	20	
	Acts of dressing more or less indifferent, except perhaps pleasant feelings when dressing is completed.	4	
	Feelings of pleasurable interest while reading morning paper.	6	
	Unpleasant thoughts from reading of railroad accident		12
8 to 9 a. m.	Breakfast: Pleasant sensations of taste from eating orange (30), fried potatoes (15), steak (35), bread and butter (10), coffee (20).	110	
	Unpleasant sensations in hurry to reach office in time		20
	Pleasant sensations on arriving in time	5	
9 a. m. to 12 noon	Sensations, thoughts, and feelings more or less indifferent during office hours.		
	Call down by chief for a mistake, causing unpleasant feelings.		30
12 noon to 12.30 p. m.	Lunch: Agreeable sensations of taste while eating ham sandwich, pumpkin pie, and drinking glass of milk.	40	
	Pleasant conversation and smoking cigar	30	
12.30 to 4.30 p. m.	Indisposition to cease smoking, causing unpleasant feelings.		5
	Hearing another clerk called down for errors	10	
	Opening windows a few moments for ventilation	6	
	Difficult point in work, causing unpleasant feelings		20
	Sensations of relief after solution of difficulty	7	
	Ceasing work and preparing to go home	12	
4.30 to 5 p. m.	Walking home, breathing of fresh air, feeling of relief, etc.	35	
5 p. m. to 6 p. m.	Reading of evening paper, reading of letters, etc.	20	
	Writing of two letters, one business, one social		8
	Pleasant feelings on finishing letters	6	
6 to 8 p. m.	Dinner: Pleasant sensations of taste from soup (15), roast beef (40), baked potatoes (20), string beans (15), bread and butter (10), dessert and coffee (25).	125	
	Smoking cigar and conversation	40	
	Call from friends, generally pleasant conversation	15	
	Disagreement on some points		20
8 to 10 p. m.	After call of friends, feelings of contentment to settle down for the evening to read, doze, or do as one pleases.	35	
	After reading some, unpleasant feelings of fatigue and sleepiness.		10
	Retiring for the night with pleasant anticipation of rest	15	
		581	158

XX.—A SADISTIC MURDER.

Murder cases seem to be surrounded more by mystery than all other forms of crime. In most instances this is doubtless due to the want of a sufficient number of facts to make the motive clear. But there is a peculiar kind of murder which, though the facts be known, still remains incomprehensible to many persons. This kind of murder is called "sadistic," from the word "sadism," which may be defined as a feeling of sexual pleasure caused by acts of cruelty, or by bodily punishment inflicted upon oneself or others, or by merely witnessing such cruelty or punishment. There may also be a desire to humiliate, injure, or even destroy another, in order to create sexual pleasure in oneself.

As normal sexual passion is more concealed in its manifestation than other impulses, so sadistic desires are still more hidden in their

ways of seeking satisfaction. Sadistic murder is also often accompanied with horrible cruelties, indicating most intense and doubtless sometimes irresistible passion. The difficulty of comprehending the motive for such monstrous acts, where the idea of robbery, theft, brutality for its own sake, and often rape must be excluded, may cause judge and jury to hesitate, and be in doubt, and thus allow such criminals to escape. It is therefore important that lawyers, doctors, and all citizens who, as jurors, may be called upon to deal with such cases, should understand the nature of the motive.

The present case may be of assistance in explaining this species of murder, which unfortunately seems to be increasing.

CASE A.

[No. 1.]

A.

The murderer (whom we shall call "A") was assistant superintendent of a Sunday school and also its librarian. During his early life and when a young man there were no apparent indications of prurient tastes or unusual passions or desires. His bringing up was exceedingly domestic and his young associates, both male and female, all testify to his modesty and politeness. His comrades of the Signal Corps of the National Guard believed thoroughly in the innocence of A and raised the money for the retaining fee of his first counsel. The head of his counsels gave his services free, so convinced was he of A's innocence. He was held in respect by all the people connected with the church, especially the young people; he was at all times one of the prime movers for all that was good in the church. He had the confidence of all the ladies in the church, mothers trusting their *daughters* to him and requesting him to care for them.

He was in his third year in the medical school, and his reputation among his professors and classmates was that of a young man of fair ability and gentlemanly in his bearing. The demonstrator of anatomy said that A was an attentive student and did his dissecting work well; that there was no indication of his dwelling morbidly on such work, as rumor had suggested. One of his classmates, however, wrote that he saw A steal a book from another student. A, when questioned, said the book was his and kept it.

The chaplain of the prison stated that one of A's youthful companions was a young lady whom he endeavored to entice into the church, previous to the crime, upon the ostensible plea that she was not well, and that he had a private room in the church where he would willingly make an examination of her person, which she rejected with scorn and ever after refused his attention.

His counsel said that when all hope was gone, A could have secured $5,000 from a prominent newspaper for his confession, regardless of whether it was true or not, but, although his family were poor, he refused the bribe and died protesting his innocence.

It is said many believed that his execution was a judicial murder.

TRIAL.

It took twenty-two days before a jury could be obtained. Four hundred and ninety-two men were examined. This was probably due to the great publicity given to the case, and the fact that many jurors were excused on the ground that they had conscientious scruples against capital punishment. It was also known that the evidence would be of a circumstantial nature. The jury were out only twenty minutes, returning a verdict of murder in the first degree. The case was appealed and contested in the higher courts for more than two years; the prisoner was brought before the court and for the fourth time, heard the date of his execution fixed. The trial proper, after the jurymen were selected, lasted twenty-seven days.

MEASUREMENTS.[a]

Height, 1m. 68.9 c. m.; outstretched arms, 1.70 m.; trunk, 91.6 c. m.; head, length, 19.5 c. m.; head, width, 14.6 c. m.; right ear, length, 5.6 c. m.; left foot, 25.3 c. m.; left middle finger, 11.5 c. m.; left little finger, 8.8 c. m.; left forearm, 46 c. m.; color of left eye, circle azure; forehead, incl. caedv; high; width, broad; nose, length medium, projection full, breadth broad; chin, round; hair, medium chestnut; complexion, light; weight, 140 pounds; build, medium; age, 24 years; born in Canada.

Physically A was below medium height and of light weight, but of solid build. In walk he was erect, head well thrown back, and frame well poised, but with an ambling, constrained gait, like a sailor. All his movements were alert, hand grasp strong and hearty, of a vital motive temperament, which, with unusual length of body in proportion to height, conveyed the impression of great vitality and physical strength. His complexion was clear, but colorless.

[a] Measurements and description of A furnished by the prison authorities.

His eyes (small orbital capacity) were medium size, blue, clear, half closed in conversation, eagerly searching your own with quick restless gaze, as though sounding your thoughts for a gleam of mental responsiveness. The upper and lower eyelids were chronically congested, as though he had been weeping. The nose was rectilinear, of medium length, concave, broad, and flat toward the center, septum thick and protuberant at the end; his mouth was large and shapeless; his lips were thick; the ears were medium, moderately close to cranium, lobules small, otherwise normal except as to helix with Darwinian tubercle. The beard was scanty, moustache slight and of a reddish hue; hair coarse and abundant. The lower face

[No. 2.]

A in prison garb.

This photograph illustrates how different the same individual, after having head shaved may look.

in profile was somewhat projecting; jaw and chin firm and medium; teeth good. Cranium of ordinary capacity, of the oxycephalic (as to the top of head) and delichoephalic as to type, with ample posterior capacity and occiput, but without noticeable anomalies. Forehead was somewhat high, but medium in breadth, sloping perceptibly toward the parietal; zygomatic progress noticeable, though the face in its neighborhood was sunken, approaching the dish face. His health was very good. His nervous organization was phenomenal, and accounted, from a physiological standpoint, for his remarkable equipoise.

ANTECEDENTS.

Very little seems to be known of the antecedents of A. The prison chaplain says that A's mother was a most remarkable woman, without evidence of an emotional nature, with nerves of steel; that she laughed and chatted with men and visitors, the coolest and most unconcerned among the several hundred of spectators, was repulsive in her heartlessness; that she and her husband sat down to a hearty meal with the body of her executed son in its coffin within a few feet of them and seemed to enjoy the meal greatly. That it is probable that the woman had a strain of Indian blood in her veins; she was a Canadian by birth.

FIG. 1.—Top landing of belfry, where body of first victim was found.

FIRST VICTIM—MISS B.

The body was found Sunday morning, April 14, on the top landing of the unfinished belfry of the church (fig. 1); it was entirely nude. It was necessary to break open the belfry door, as the knobs to the door were off, and the door could not be opened with the janitor's key. The head of the body was directly in the corner, the feet were close together, the hands were folded across the breast, the face was up; there were two small blocks to hold the head in position; the body was white like marble; there was no odor about it; after the body was brought down from the belfry, it changed color, and there was an odor. There was a discharge of a dark brown color from

the mouth which ran on the floor of the belfry, covering a space of about 10 inches square, irregular in shape. What seemed to be blood stains, 5 to 7 inches wide, were found on the lower floor of the belfry; there were also blood stains on the large frame which stood on the lower floor of the belfry. From this testimony it would appear that the murder was committed on the lower floor of the belfry and subsequently the body was carried up to the top floor in order, perhaps, to remove it as far out of the way as possible.

First victim, Miss B.

The clothes of the victim were found in different places scattered about; the waist or basque among the rafters above, with sticks upon it, in southwest corner of belfry, the skirt in the southeast corner with sticks upon it also. The basque was torn at the throat and there was a tear in the rear portion of the skirt. The corsets were hanging from the top of the platform, and the corset cover on the beam under the rafters; portions of the underclothing were under the casing at the top of the belfry; a hatchet on the beam near the roof over the belfry; victim's schoolbooks among the joists of the ceiling in a corner opposite to the belfry. The books were strapped

tightly together. The purpose of hiding the clothes in so many different places probably was to keep the crime from discovery as long as possible.

The autopsy on Miss B by the official physician at the morgue, showed that she had died from asphyxiation caused by strangulation. The skin over the entire body was discolored and in process of decomposition. There were seven finger-nail incisions on one side of the neck and five on the other side. From the depth of the incisions it would seem that there had been a great struggle. The incisions were very close together, extending down to the collar bone, one directly under the other.

The vagina was full of foul-smelling secretion fluid. The internal organs were not in an advanced stage of decomposition. There was a congestion of the larynx and trachea. The body was well nourished. Menstruation had nearly reached its limit. The decomposition of the body interfered with a thorough examination.

The seven finger-nail incisions could be accounted for easily by placing the hands together upon the throat; they could be made by two grasps of the hands about the neck. The body weighed about 140 pounds and appeared to be that of a healthy woman.

SECOND VICTIM—MISS C.

The body of the second victim was discovered in a small room (fig. 2), on Saturday morning, April 13, adjoining the library of the same church, in the belfry of which the first victim, Miss B, was found on the following day.

The autopsy, conducted by the physician at the morgue, showed that Miss C died from asphyxiation and hemorrhage. The asphyxiation was caused by the insertion of rags in the larynx and trachea of the girl. The rags consisted of pieces torn from C's underclothing. The wounds consisted of a lacerated transverse cut on each wrist reaching across the full transverse length of the anterior portion of the forearm. In the forehead there were two vertical cuts a little less than an inch in length and almost connecting with each other just above the root of the nose. There was also a lacerated wound in the second intercostal space, a little to the left of the median line of the chest. There were similar lacerated wounds in the third and fifth intercostal spaces. The arteries in the wrist, four in number, were severed. Some of the wounds appeared to be postmortem. It further appeared that violation had been committed both before and after death.

The instrument used was an ordinary table knife. The knife was broken off nearly to the handle, and several pieces were found embedded in the various wounds.

In the corner of the room (fig. 2) where Miss C's body was found, there were blood spurts on the wall, extending as high as the gas fixture, and a large spot on the floor appeared to have been a pool of blood.

THE CIRCUMSTANCES CONNECTING A WITH MURDERS.

About 5 p. m., Wednesday, April 3, the organist came to the church and begun to practice a piece on the piano in the Sunday school room. He had not been there over two or three minutes when A appeared

with hair somewhat disheveled, neither coat nor hat on, and vest unbuttoned, standing and looking at the organist, who asked A why he seemed so pale. A said he had been overcome with gas. He sent the organist out to get some bromo-seltzer. A's eyes were congested somewhat; the bromo-seltzer nauseated A instead of helping him.

A told the organist that he had met Miss B that morning and had ridden with her to the high school. A and the organist left the church together. Other evidence tended to show that A arrived at the church with Miss B about 4 p. m., or a little after, and remained there until 5 p. m., when he met the organist. While the evidence

Second victim, Miss C.

was wholly circumstantial, the jury were convinced that between the hours of 4 and 5 p. m. of that day he murdered Miss B.

A had known Miss B for six months or more, and waited upon her perhaps as much as any of her gentlemen friends, but he was not pressing in his attentions. Miss C was 21 years of age, small of stature, weighing about 90 pounds. She was cheerful in disposition and her character beyond reproach.

According to the evidence in possession of the officers of the law, Miss C and A were near the church on April 12, about 8 o'clock in

the evening, engaged in an earnest conversation. A appeared to be pleading and C protesting, so much so that a stranger near by thought A was conducting himself improperly and was about to interfere, when C took A's arm and went with him to the church. In about an hour afterwards A came out of the church alone and went to a social gathering, arriving about 9.30 that evening. His hair was somewhat disheveled, perspiration was on his forehead, and his

FIG. 2.—Corner of room where body of second victim was found, showing blood spurts on wall, reaching above gas jet.

hands were slightly dirty, so that he asked permission to wash them. Then he joined the company, acting in no way to create any suspicion. On the next morning (April 13) as before stated, the mutilated body of Miss C was found in a small room adjoining the library of the church.

In both these murders the stubborn fact that suspicion could be thrown upon no one else but A stood out in its boldness.

REMARKS OF A. ON THE SCAFFOLD.[a]

On ascending the scaffold and after being placed in position, A made the following remarks:

To those who wish me to say something, I will say that I have no animosity toward any except those who have hounded and persecuted me to my death for a crime that never stained my hands, and I forgive them as I hope to be forgiven. The crime was fastened on me by the press of San Francisco, but I forgive all. It is they who have forever blackened the fair name of California by putting to death this innocent boy. Whether the perpetrators of this crime will ever be discovered matters little now to me. All I can say is that I am innocent, and I want those who have circulated the report that I had a sensation to spring to hear it. For the last time on earth I declare my innocence before God, to whom I now go. He knows the heart and reads the mind, and He will judge me, not as I was judged here, but as I should be judged.

While the prisoner refused to take any stimulants and showed great courage up to the last, his final remarks on the scaffold seemed more like a recitation than a spontaneous expression of thought from an innocent man.

CONCLUSION.

These cases are undoubtedly ones of sadistic murder. The evidence of this is stronger in the case of the second victim, Miss C, whose body was mutilated before death, as indicated in the blood spurts on the walls and the pool of blood on the floor where she was found. In the case of the first victim, Miss B, the nail imprints about the neck, the blood stains on the lower floor of the belfry and on the large frame there indicate that had there been a thorough examination made of these surroundings still further signs pointing to the lustful side of the murder might have been found, notwithstanding the fact that it was nine days after the murder had been committed, making the blood marks much less distinct.

As A was a medical student, he would have naturally taken the greatest precautions not to leave any traces of blood on his clothes, and may have also, as far as time would permit (he had not more than an hour in each case), destroyed some of the traces of blood on the surrounding objects.

MOTIVE.

It seemed to have been assumed in the trial that there were only three available theories as to the motive for the murder: First, pure desire for blood as manifested in cruelty; or second, a sudden anger arising from refusal to accede to improper proposal and threat to expose; or third, murder to destroy the victim of rape. As A had never before manifested any brutality, the supposition of thirst for blood for its own sake, or pure cruelty, would be very improbable. As to the second motive, of sudden anger, this also would be impossible, from what is known of A's character. The third supposition, to destroy the victim of rape, is equally improbable for a man of A's type, and especially one who had a medical training.

THE REAL MOTIVE.

There is but one motive that will explain these murders; it is the abnormal and intense sexual passion, a form of sadism, that takes extreme pleasure sometimes in merely choking, without necessarily

[a] The most intelligent criminals are least liable to confess on the scaffold. See page 406 of "Man and Abnormal Man."

causing death; if the passion be not satisfied, the choking is liable to be continued until death ensues, as in the case of Miss B. If the passion still remains unappeased, cutting and mutilating of the victim's body before and after death may be carried on almost to any extreme. Or the choking may be continued just enough to make the victim helpless and prevent her from making any noise, and then wounds, often superficial at first, may be inflicted on the living body, causing the flow or spurting of fresh blood. If the passion be still unsatisfied, the wounds are generally made deeper, causing the blood to flow or spurt in larger quantities, as appeared in the case of Miss C. These seem to be the two ways, as indicated by the evidence which was employed; and this without regard to whether the murderer be known or not. Choking, strangling, or wounding the body before and after death are perhaps the most frequent of the many methods of satisfying the extreme stages of sadistic excitment. Sadistic monsters not only differ greatly in their ways of satisfying passion, but often the same monster will voluntarily, or from necessity, employ methods varying according to his own nature or that of his victim or according to place or surroundings where crime is committed. Also limited time, or fear of being caught, may prevent the monster from carrying out his atrocities. It may be remarked in passing that the so-called "Jack the Slasher," who cuts women's garments and "Jack the Vitriol Thrower," have the same sadistic sexual passion as their motive, but expressed in less violent forms. The various ways of appeasing sadistic passion are almost infinite in number.

APPARENT MYSTERY.

How can a young man of good reputation, polite, and modest, especially in his conduct toward women, begin to commit such atrocious crimes? It is probable that if A's crimes had remained undiscovered a week longer, he would have sought more victims and would not have ceased until discovery or fear of discovery caused him to. Had he known or felt such sadistic impulses during childhood or youth, he would in all probability have manifested them. He probably had these feelings or impulses some time before actually carrying them into effect; he may have struggled against them at first; then he may have yielded to them in some very slight way; and it may be in the case of his first victim that he had no intention of murder, but, having aroused his sadistic passion, he was unable to resist it until its complete satisfaction, a fact that has frequently been confessed by sadistic criminals. (See below.) In the case of his second victim, however, he probably intended to satisfy his sadistic nature at almost any cost to the victim; he pleaded with her to come into the church with him.

A was careful and cautious of nature, as his conduct during the trial showed. It is not probable, therefore, that he intended to kill his first victim, as suggested, for he would know that the body would be discovered eventually and suspicion be cast upon him. Hence the removing the body and clothes out of the way as far as possible, the breaking of the knobs on the door, so that it would be necessary to force an entrance into the belfry. But in the case of his second victim no such precautions seem to have been taken. His monster sadistic passion may have gained complete control of him, absorbing his

mind so that he was oblivious to almost everything else, a fact often confessed by sadists of this type. A man like A, with a medical training and having such a passion, would naturally keep it an absolute secret, and this with his previous good reputation would help to protect him from suspicion.

MILD FORMS OF SADISM.

In order to comprehend more fully the crimes of A, it may be useful to mention a few examples, illustrating milder forms of sanguinary sadism, before citing cases, similar in certain respects to his own.

There is the case of a boy who experienced sexual feeling by viewing a picture of a battle scene. It is known that after battles, especially where much blood is shed, the soldiers are sometimes seized with strong sexual impulses. Some authors, as Bloch,[a] believe that the bloody scenes in gladitorial contests and bull fights arouse sexual passions in the audience.

Krafft-Ebing[b] reports the case of a young man, 25 years of age, who at 18 experienced a voluptuous feeling from seeing blood come from a wound in his own finger; he would often cut his fingers in order to cause this feeling. Finally this had no effect, but the sight of blood from the finger of a young woman, especially one sympathetic with him, gave him great pleasure, and it was with difficulty that he refrained from wounding his two girl cousins. His imagination was haunted with ideas of blood, which gave him voluptuous emotions.

A surgeon confessed to the writer, that while reading in a surgical work a description of the puncturing of a festered wound he found himself, to his astonishment, in a state of sexual excitement.

Another case[c] (studied by the writer), was that of a youth of 16, who confessed to strong sexual excitation being caused by reading in a newspaper the details of a brutal wife murder.

EXTREME FORMS OF SADISM.

Lombroso[d] reports cases illustrating several phases of sadistic murder, where two of the victims were found naked, the monster confessing, that as soon as he grasped his victim by the neck, intense sexual sensations were experienced; usually simply choking his subjects satisfied him, but if sexual satisfaction was delayed. he continued the choking until death. This was probably A's experience with his first victim.

Another case[e] was that of a married man, father of several children, who up to 30 years of age had led an exemplary life, and then suddenly began to strangle women, murdering six during a space of ten years. Some he did not violate; others he would abuse before murdering them. He was very cautious; his good reputation doubtless helped him to remain undiscovered so long. One of his victims

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[a] Beitraege zur Aetiologie der Psychopathia Sexualis, S. 46.

[b] Psychopathia sexualis.

[c] Le Criminel Type dans quelques formes graves, etc. Bibliographie de sexualité pathologique. Paris, 1895.

[d] Goltdammer's Archiv. XXX, p. 13.

[e] L'Homme Criminel and Pazzi ed Anomali, p. 143.

was a young robust woman; he walked and conversed with her on the road, and then suddenly grasped her by the throat, holding her hands, and offering her money if she would submit to him. On her refusing, he drew a knife and stabbed her in the chest and continued to wound her after violating her. When arrested, he denied having committed the crime. Subsequently he confessed all, showing neither pride nor remorse.

Another case [a] (published by the writer) was that of a sexton of a church, 30 years of age, a married man with family and of good reputation, who on the scaffold confessed to having intense sexual excitation from braining a little girl in the belfry of the church; he also had brained a woman 28 years of age. He did not violate either of his victims. His confession was most horrible and loathsome. As in the case of A, his lawyer had felt absolutely convinced of his innocence.

RECENT LITERATURE ON SADISTIC MURDER.

Arnemann. Die Anomalien des Geschechtstriebes und die Beureilung von Sittlichseit'sverbechen. Leipzig, 1804. B. Konegen.

Baumaum (Felix). Im dunkelsten Amerika. Sittenschilderungen aus den Vereinigten Staaten. Dresden, 1902.

Bloch (J. B.). Beitraege zur Aetilogie der Psychopathia Sexualis. II. Dresden, Dohrn, 1903.

Bossard (V. E.) et de Maulle (R.). Gilles de Rays maréchal de France. (1404–1440.) Paris, 1886.

Brouardel. Viol et violence. Clinique de Bruxelles, pp. 225 to 229. 1906.

Bumke. Zur Frage der Haeufigkeit homo-sexueller Vergehen. Muenchen mediziniste Wchnschr. LI, p. 2333.

Carrara. Omicida lascivo epilettico, Archivio di psichiatria (etc.). Torino, XIV, pp. 268 to 270. 1893.

Caufeynon. Aberrations, folies et crimes en sens génital perversion; Perversité; etc. Paris. Offenstadt Co., 1903.

Cahddock, C. G. Mental Perversions of the sexual instinct. Text-book Legal Medicine. Peterson and Haines, Philadelphia. (In Text-book Legal Medicine, pp. 683 to 715).

de Cherveix (Jean). Deux cents viols par. un maréchal de France; relation historique des débats civils et religieux; desproces intentes au Maréchal de Rais. Paris, 1903.

Daniel, F. E. The cause and prevention of rapes; sadism in the negro. Transactions of the Texas Medical Association, XXXVI, pp. 279 to 291. Austin, 1904.

Doerr. Mädchenstecher. Archiv fuer kriminale Anthropologie und Kriminalstatistik, XV, p. 280. Leipzig, 1904.

Donath (J.). Zur Psychopathologie der sexuellen Perversionen. Pester Medizinisch-Chirurgic Presse. XLIV, 692; 712; 727; 760. Budapest, 1904.

Dubrandy. Viol d'une petite fille de six ans avec arrachement des organes génitaux internes et du gros intestin. Annales d'hygiene. XVIII,, 289. Paris, 1904.

Von Egloffstein. Nothzucht an einer 75 jaehrigen Frau. Archiv fuer Kriminale Anthropologie und Kriminallistik, XVI, p. 172. Leipzig, 1904.

Eulenburg. Sadismus and Masochismus. Wiesbaden. Bergman, 1902.

Friedlander (Benedict). Bemerkungen zu dem Artikel des Herrn Dr. Rudin ueber die Rolle der Homosexuellen in Lebens Procezess der Rasse Archiv fuer Rassen und Gesellsihaftlich, Biologie 1, 219 to 228. Berlin, 1904.

Hazlett (R. W.). A brief review of the case of Theodore Durrant, psychologically considered. Transactions of the Medical Society of West Virginia, pp. 199–203. Wheeling, 1898.

Hirschfeld (Magnus). Das Ergebnis der statistischen Untersuchungen ueber den Prozentsatz der Homosexuellen. M. Spohr, Leipzig, 1904.

———. Jahrbuch fuer sexuelle Zwischenstufen unter besonderer Berueck-sicht der Homosexualitaet. L and LI. Leipzig, Max Spohr, 1905.

[a] Le Criminel-Type, etc., loc cit.

Holtz (L.). Crimes passionnels. Paris, 1904.

Howard W. L.). Sexual perversion in America. Am. Journal Dermatology and Genito-Urinary Diseases, VIII, pp. 9 to 14. St. Louis, 1904.

Ilberg (G.). Ueber Lustmord und Lustmoerder Monatschrift fuer Kriminal Psychologie, II, pp. 596 to 622. Heidelberg, 1905–1906.

Jolly. Perverser Sexualtribe und Sittichkeitsverbrechen. Kliniches Jahrbuch, XI, pp. 197, to 216. Jena, 1903.

Jourdran. Psychologie des Sarimbavy; perversion sexuelle observee en Imeria. Cadacee, Paris, 1903.

Knauer. Mord aus Homosexualitaet und Aberglauben Archiv fuer Kriminal Anthropologie und Kriminalistik, XVII, pp. 214 to 220. Leipzig, 1904.

Koppen (M.). Sexuelle Perversitaet, Sammlung von Geriechtlicher Gutachten aus der Psychiatrischen Klinik. In Koenigliches Charite zu Berlin, 1904.

Von Krafft-Ebing (R.). Psychopathia sexualis mit besonderer Berueck-sichtigung der contraere Sexualempfindung. Stuttgart, F. Enke, 1903.

———. Psychopathia Sexualis with special reference to the antipathic sexual instinct. A medico-forensic study. New York and London, Rebman Company, 1906.

Laborde. Manouvrier, Papillaut et Gelle, Étude Psycho-physioligique, médico-légale et anatomique de Vacher. Bulletin de l'Académie de Medicine, XLIII, pp. 331. Servia, 1900.

Kulanback. Ein Fall von Leichenschaendung. Archiv fuer Kriminale Anthropologie und Kriminalistik. Leipzig, 1904.

Lacassagne (A.). Boyer et Rebatel. Vidal le tueur de femmes. Archives d'Anthropologie. Kriminelle XVII, pp. 645 to 898, 1902.

———. Vacher et les crimes sadiques. Paris et Lyon, 1899.

Laurent (Emile). Sadisme et masochism. Paris, 1900. Vigot freres.

Lombroso (C.). L'homme criminel, criminel né, fous moral epileptique. Étude Anthropologique. Paris, F. Alcan, 1887.

Locard (Edmond). Les crimes de sang et les crimes d'amour au XVII siecle, Paris. A Stork & Cie., 1903.

MacDonald (Arthur). Le Criminel-Type dans quelques formes graves de la criminalité; Jesse Pomeroy, "the Boy Torturer;" Piper, "the brainer" (Belfry case, Boston); "Jack the Ripper" (de Londres). Bibliographie de sexualité patholigique. Troisième édition. A. Storck, Lyon, et G. Masson, Paris, 1895. This work is not published in English.

Moll (Albert). Untersuchungen über die Libido sexualis. Berlin, Fisher, 1897–8.

Naecke (P.). Probleme auf dem Gebiete der Homosexualitaet. Allg. Zeitschroft fuer Psychiatrie (etc.) LIX 805 to 829. Berlin, 1902.

———. Buecherbesprechungen (on same). Archv fuer Kriminall Anthropologie und Kriminalistik, XI, pp. 272 to 278. 1903.

Nina Rodrieguez. La psicaeogia del depecage criminal. Archives de psiquiaria y criminal, II, pp. 385 to 422. Buenos Aires, 1903.

Paffrath. Ein sogenanter Midchenstecher (Piquer) und die Begutachtung seines Geisteszustandes von Gericht. Aerzleche Sachverstaendigen Zeitung IX, pp. 301 to 308. Berlin, 1903.

Ploss-Bartels. Das Weib in der Natur und Volkerkunde, 1 p. 443. Leipzig, 6 Auf., 1899.

Preixotto (Edgar D.). Report of the trial of William Henry Theodore Durrant, indicted for the murder of Blanche Lamont, etc., also giving evidence of the murder of Minnie Williams. Detroit, Mich., 1899.

Reti (S.). Sexuelle Gebsechen. Halle, A. S., 1904. C. Marhold, 148, p. 80.

Rheinisch (F.). Leichenschaedung, Archiv fuer Krim. Anthrop. u. Kriminalist. Leipzig, 194, XV, 278.

Ruedin (E.). Zur Rolle der Homosexuellen in Lebensprozess der Rasse. Arch. f. Rassen und Gesellach. Biol., Berlin, 1904. 1 pp. 99 to 109.

Salgo (J.). Die sexuellen Perversitaeten vorn psycharichen und forensischen Gesichtespuenkte. Pest. Med. Chi. Presses, Budapest, 1903. XXXIX, pp. 6 to 11.

Scheitlin (C. A.). Die Ausseheidung des Verbrechens der schweren Koeperverletzung. (Bern) 8, St. Gallen, 1890.

Serge (Paul). Le vice et l'amour. Édtude médicale philosophique et sociale des perversions du sens génital. Paris, 1905; 355 p. 80.

Sper (A.). Der Marquis de sade und der Sadismus. Berlin, 1904. 183 p. 80.

Tarnowsky (Benjamin). L'instinct sexuel et ses manifestations morbides au double point de vue de la jurisprudence et de la psychiatrie. Paris, 1904. C. Carrington, 320 p. 80.

Thomas (P.). Le Sadisme sur les animaux. Arch. d'Anthro. Crim. Lyon and Paris, 1903. XVIII, pp. 564 to 570.
Travers. Maedchenstecher. Arch. f. Krim.-Anthrop. und Kriminalist. Leipzig, 1904. XV, p. 396.
Weir (J.), jr. The sexual criminal. Med. Rec., N. Y., 1895; XVIII pp. 581–583.
Wert (Ludwig E.). Homosexuelle Probleme im Lichte der neuesten Forschung allgemeimer staendlich dargestellt. Berlin, 1903. C. Messer & Cie., 263 p. 80.
Wigmore (John H.). The Durant Case. Amer. Law Rev., Jan.-Feb., 1896, St. Louis, Mo. Pp. 29 to 54.

XXI.—STIGMATA OF DEGENERATION.

As already stated and according to the best and most trustworthy statistics, crime, pauperism, insanity, and suicide have been increasing relatively faster than the population in almost all countries of the world.[a] This indicates also an increase in degeneration. The rapid development of society, as indicated by numerous new inventions, increased opportunities for travel, and the enterprise of the press, so that now at breakfast one can read all the news of the world. The tendency of the young to seek the excitement of city life, and the consequent condensation of population, with its accompanying evils, such haste in civilization may cause an abnormal development of and strain upon the nervous system, which can result in weakness, depression, and pessimism. This can cause a loss of self-control, with its consequent abnormal actions, that may culminate in crime and other social evils.

DANGER OF WEALTH.

There is perhaps no more powerful influence for hindering the development of a young man than the prospect of his having plenty of money and no necessity to work. The number of such cases is large, especially in times, as at present, where so many and so great fortunes are accumulated. The parents seem to desire that their children be spared the hardships they had to endure. But they forget that these difficulties produced a hardihood that was probably the basis of success. Thus the tendency of great wealth, with its luxury and ease, favors the development of degenerative processes.

MISUSE OF TERM "DEGENERATION."

A person may have several physical stigmata or signs of degeneration and be at the same time endowed with moral and intellectual powers of the highest order. One may possess a healthy body and be a criminal by nature. A mental genius may be morally depraved. A high moral sense may coexist with mental mediocrity; indeed it is not uncommon, but unfortunate to find goodness of heart combined with mental stupidity. There are very few persons without a stigma of degeneration.

[a] Statistics of crime, suicide, and insanity and other forms of abnormality in different countries of the world, in connection with bills to establish a laboratory, etc. Senate Document No. 12, Fifty-eighth Congress, special session, 8°. Government Printing Office, Washington, D. C., 1903.

In brief, mental, moral, and physical defects and endowments may exist in individuals in most varied degrees and apparently independent of each other. Great injustice is therefore often done, by applying the term "degenerate" indiscriminately. In fact, some of the most ideal characters have been physical nonentities, or even physical degenerates of a pronounced type.

MEANING OF DEGENERATION.

In its anthropological sense, degeneration signifies departure from the primitive type, or reversion to a lower type, causing deterioration and loss of native faculties or race characteristics. Thus domestication has caused the degeneration of most of the primitive races.

For the naturalist the most perfect type of horse is the Arab horse, the horse of nature and savagery. But from the agricultural point of view, the domesticated horse is superior.

Degeneration in a general sense may be considered an essence, aptitude, or tendency which hinders development (mental, moral or physical) favorable to the species and tends toward diseases, which lead to dissolution of the species or offspring.

This essence, aptitude, tendency, disposition, or weakened power of resistance, existing from birth until death, is degeneration.

This degenerative tendency may manifest itself by mental, moral, and physical effects, signs, or stigmata, which may be the product of an original defective disposition or the result of bad nutrition before or soon after birth.

These stigmata are either physical and so signs of intrauterine degeneration, or are mental and moral and can be signs of degeneration appearing in childhood or later in life.

The popular idea of degeneration is a man of bad moral tendencies and habits—a profligate, spendthrift, gambler, drunkard, opium fiend, libertine, and the like. It is the moral defects of stigmata rather than the physical and mental that the public mind emphasizes in designating an individual as degenerate.

THREE KINDS OF DEGENERATION.

There are three kinds of degeneration—physical, mental, and moral. Social and economic are forms of moral degeneration.

Physical degeneration is a morbid impairment of any tissue, fluid, or organ of the body, causing a reduction or tendency from a higher to a lower form. This impairment is congenital and its effect is to hinder the regular development of tissue or organ, resulting in some malformation or stigma which tends to separate the individual from his race, family, or type. Such separation places the individual in an abnormal or pathological state of being, where in comparison with his ancestors he is weakened in the struggle for existence and tends toward eventual elimination.

The characteristic stigma of mental degeneration is a want of harmony, or a disequilibrium of the mental faculties. One or more faculties may predominate, or some may be so highly developed as to approach genius, or others may be absent. There may be mental weakness, exaggerated emotions, obsessions, or there may be simple tics or spells.

Moral degeneration refers to the lowering of the character and consists in any evil thought, feeling, willing, or action detrimental to individual or community, which is a permanent element or tendency in the character of the person. Like physical and mental degeneration, it may express itself in acts, which are its signs or stigmata.

A. PHYSICAL STIGMATA OF DEGENERATION.[a]

Whether physical degeneration has to do with a regressive anomaly (atavism), or with a pathological lesion produced during the intrauterine period, or during the first days of infancy, is a question as difficult as it is important. Such an inquiry, however, would lead far beyond the purpose of this study.

Thus, for instance, microcephaly may be regarded as an atavistic condition, in which the large brain has remained undeveloped. Too many fingers may be considered as an accidental division due to a simple original tendency.

An abnormal number of hairs on the body (hypertrichosis) might be regarded as a return to a lower type; or as a substitute for weakness of skin sensibility, which has not the power to push out the embryonic hairs.

HOW VARIATIONS MAY PRODUCE STIGMATA.

It is well known that organisms through greater or less variation can be eliminated or set outside of their species or family. These variations may be caused by changes in a single organ, which can produce an arrest of development, or lead to the highest development of the organ. Such an organ can be wholly stopped in its growth as the muscle which serves for the movement of the ear in man. Thus it is thought that the maxillary and sternoclavicular articulation is probably a reduced part of the skeleton; so the origin of the tendons has been explained. That is, the muscle substance, through different mechanical effects, became weak, inflammation set in, then disintegration, leading to the formation of a scar or cicatrix; and this process was carried over to the whole mammal kingdom, making the ligaments as former tendonous parts of muscles.

PRODUCTION OF CRANIAL STIGMATA.

It is easy to understand how a microcephalic, for simple anatomical reasons, would have a rudimentary mental life, but not so easy where the cranial volume is exaggerated. The volume is not, however, necessarily connected with the encephalic development. Certain affections may occur during gestation or early infancy and give rise to inflammation, which causes eccentric pressure. The bones shape themselves according to the adjacent substance in the first period of life, resulting in an abnormal development, sometimes lessening, sometimes increasing the volume.

RELATIVE VALUE OF PHYSICAL STIGMATA.

All physical stigmata vary in their value as signs of degeneration. Those which are the most localized or superficial indicate less serious alterations of the nervous system. Thus the anomalies of the pavilion of the ear are frequent in normal persons.

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[a] See "Man and Abnormal Man," pages 281–284, under head of "Youthful Degeneracy."

Stigmata are more serious in proportion as they are more profound and more numerous. But as we rise in the scale of degeneration the physical signs lose more and more their importance, are inconstant, and more often absent, and seem not to have any correlation with mental troubles. Thus in idiots, cretins, and imbeciles physical stigmata are of more value, till we reach the superior feeble-minded, when psychological signs take precedence in significance. The stigmata of degeneration should be distinguished from deformities, coming from mechanical accidents of gestation, congenital amputations, etc. But they are not to be differentiated from certain pathological deformities due to diseases of the last period of gestation, or of early infancy.

We will now give what are regarded by leading authorities as the physical stigmata of degeneration, as they appear in different parts of the body.

Fig. 1.

CRANIAL STIGMATA.

The slowness of ossification of the fontanelles is frequent in degenerates. Microcephaly is generally produced by an arrest of development of the cranium as a whole. Macrocephaly can be in the form of hydrocephaly. Macrocephaly is more often the consequence of defective development of the osseous system in general.

Malformations of the cranium considered pathological by some authors might be due to defects of development of the sutures. Plagiocephaly, or an oblique cranium, can be the result of a lateral decubitus, or it can be produced by the premature ossification of the coronal sutures.

Scaphocephaly is due to a premature soudure of the sagittal suture, making a keel-shaped head, resembling a boat upside down. Acrocephaly (sugar-loaf head) is due to the premature synostosis of the two coronal and sagittal sutures. Trigonocephaly is due to a premature synostosis of the metopical suture, having the form of a triangle.

The hairs near the vertex form a little turbillon or vortex (fig. 1), which is rarely in the median line, but it seldom deviates more than 25 to 30 millimeters. In degenerates these deviations may be much greater.

The asymmetry of the volume of the cranium usually coincides with the asymmetry of the face, which is characterized by the different orbital capacity and by the unequal projection of the orbital arches and malar bones.

The exaggerated projection of the upper jaw and teeth is prognathism. The lower jaw may be large, as is claimed to be the case in criminals.

The presence of two round bosses (generally developed) is regarded as a symptom of hereditary syphilis. This is called naticephaly. Extreme prognathism can be accompanied with a depression of the root of the nose and a parting of the narines giving the appearance of bestiality with a similar physiognomy.

Fig. 2.

Another stigma is the lemurian apophysis of Albrecht, which consists in the protecting of the angle of the jaw over its lower border.

EAR STIGMATA.

The ear seems to have attracted special attention. There is the absence of pavilion with or without malformations of the middle and internal ear. But more often it is partial absence of pavilion. The lobe is sometimes wanting. The stigmata may consist in volume, the ear being too large or too small, or in its direction, as standing out prominently (fig. 2).

The most numerous anomalies are found in the concha. The root of the helix, instead of rising from the base of the concha, projects throughout the whole extent of the cavity, dividing it into two cavities. The root of the helix may be doubled, or with the root of the antitragus may form two parallel projections, filling the cavity of the concha.

Sometimes the helix exists only in its ascending part; the outside border of the pavilion is wanting, and the navicular fossa is more or less effaced. Often the ear without border is very large.

The Darwinian tubercle varies in its position on the border of the helix; sometimes it is double (fig. 3).

The antehelix can be effaced or form a projection greater than that of the helix. The tragus is sometimes reversed, sometimes doubled.

If the concha is very deep with a small pavilion, the ear has the form of a comet. The lobe sometimes is wanting, as in monkeys. It presents numerous anomalies of volume and form. It may adhere to the cheek (webbed ear).

The form of the ear may vary with age.

EYE STIGMATA.

The eye can have prominent orbital arches. Sometimes the eyes are very near together as in the monkey, giving to the face some resemblance to a bird of prey. Sometimes the eyes are very far apart. The slit between the eyelids may be broad, leaving the eye uncovered,

Fig. 3.

or it may be narrow so that the iris can scarcely be seen. This slit or fissure may be more or less rectangular, sometimes straight, or oblique.

The eyelids may be wanting, or adhere to each other, or to the ball of the eye.

The cartilages forming the palpebral framework may be undeveloped, taking away the support of the lids, and thus causing them to be soft, and in folds and resulting in a congenital entropion (inversion of eyelid). The conjunction may present a permanent vascularization, or an anomaly of a fold of the conjunctiva like a membrane over the eyeball, a sort of rudimentary third eyelid. One may observe colored spots, or certain vascular dilatations, or little pimples constituting conjenital pterygion (hypertrophy of the conjunctiva).

The eyeball may project out (pop-eyed), or sink into the orbital cavity and be hidden under the orbital arches and present a sickly or wild appearance.

Another degenerative stigma is an ophthalmia (imperfect development of the socket of the eye). This on account of its close ana-

tomical connection with the brain may be concomitant with or accompany general cerebral troubles. Sometimes there is a simple reduction or shriveling up of the eye.

The eyeball may be especially hard and the intraocular tension exaggerated. This sort of congenital glaucoma is due to the same causes which provoke hydrocephalus and a hydroopthalmia.

Some of the malformations of the iris are congenital divisions more or less marked in its circumference, the colomba of the iris, or the iris may have several openings (policoria); or it may be pierced at its center, so that the pupil is displaced (corectopia). There may be a series of indentations in the circumference of the pupil (discoria), or there may be no opening or perforation (acoria). Sometimes the pupil is obliterated by a thin veil, there being defective resorption of the tissue. Another anomaly is the existence of many different colors on the surface of the iris, or absence of pigment presenting a white aspect in this region (albinism).

Asymmetry of the iris is a frequent stigma constituting congenital unequalness of the pupils.

STIGMATA OF THE NOSE.

The nose can be wanting entirely.

Some of the anomalies of the nose are a want of development in its bony frame called nasus aduncus, or excessive development, lateral deviations, absence of septum, atresia of the nasal fossa, asymmetry of the nostrils due to deviation of the septum.

Contraction of the nasal passages, causing troubles of breathing often influence the power of attention and through this the intelligence.

Another stigma is the depression of the root of the nose, or on the contrary the prominence or projection giving a vague impression of a horn implanted there. There is the flattening of the nose, the sinking in of the root; the end of the nose is raised up (snub-nose). The nose may bend to one side throughout its whole length or more frequently the deviation is confined to the lower part. The nasal passages may be narrow. Here atresia is most often found. A nasal fistula may persist; or there may be hypertrophy of the vomer alone, which can impede respiration.

STIGMATA OF THE MOUTH.

The mouth can be too large or too small. The coincidence of congenital macrostoma (fissure of the lips) with fibroid cartilaginous preauricular tumors indicates that these two stigmata are due to trouble of development of the first bronchial arch.

The lips can be too short, leaving the teeth exposed, as the incisors and canines, forming a prolapsus; or too thick, forming a sort of cushion on the front of the mouth (normal in negroes). Sometimes the lower lip is completely reversed, forming an octropion.

There may be also extrophy (turning out) of the upper lip; harelip, reminding one of certain rodents. Cleft palate often accompanies harelip. The harelip follows the deformities of the nose.

STIGMATA OF THE PALATE.

The palate may be asymmetrical, high and narrow, flat-roofed, horseshoe shaped, and gothic.

The narrowness of the palate indicates an arrest in development of the upper jaw, involving often irregularities in the teeth. Sometimes the tonsils are absent.

The anomalies of the upper jaw, the palatal arch, and the lips are interesting to consider in relation to the embryo of the chicken when one sometimes sees the malformations of the upper bill united with the malformation of the brain.

STIGMATA OF THE TONGUE.

The tongue can present an exaggerated or diminished volume, where in the latter case especially it is connected with difficulties in articulation. It may be too large for the mouth and so project out, as in cretins.

Anomalies of form consist in asymmetry in the bifidity of the point of the tongue and of the median fissure of the upper surface, which coincide sometimes with the perforation of the palatal arch, velum, and harelip. One may note certain cysts at the base of the tongue and in the hyoidean region vestiges of the thyro-lingual canal.

STIGMATA OF THE TEETH.

The teeth may be undeveloped, or prematurely developed, where in the latter case the first teeth may remain. There may be anomalies in number, volume, form, location, and direction. A congenital absence of a certain number, even all in the lower jaw, may occur. The separation or disjunction of the upper and lower incisors should be mentioned.

The erosions of the teeth occur at the time of their formation and are due to nutritional troubles. In hereditary syphilis the first large molar, in which calcification commences about the sixth month of fetal life, is the most frequently attacked; then came the incisors, where calcification begins about the first month after birth.

The teeth are sometimes so extremely deformed as to be unrecognizable. They may be so large as to prevent the mouth from shutting, or so small as to be scarcely visible, or very irregularly implanted, or instead of pointing vertically up and down project forward or backward, or turn upon themselves, or appear as twisted upon their axis.

STIGMATA OF THE TRUNK.

In the neck there may be a goitre, more or less developed, accompanying especially mental decay, as in cretinism. Sometimes the thyroid gland is wanting.

The thorax may be much inclined forward; this stigma is often connected with scoliosis. The thorax may be greatly compressed laterally and the sternum projected forward; or there can be simple thoracic asymmetry; the thorax may be funnel-shaped. One part may be more developed or differently and unequally developed than the other. There may be depression at the xiphoid (sword-like) ap-

pendix, or the borders may be more or less abrupt, causing a thoracic and abdominal malformation. There may be a vertical depression extending its whole length like a groove. The volume may be out of proportion to the abdomen. The thorax may be flattened in its different diameters. The shoulders may droop. An arrested development of important muscles may bring to light the embryonic origin of certain malformations. Among epileptics there is frequently a hyperostosis of development at the external extremity of the clavicle.

In the vertebral column there may be a prominence of the spinal apophyses, with a contour resembling that of the monkey. Or there may be deviations of the column, as kyphosis, lordosis, scoliosis, or the spina bifida. There may be a malformation of the coccyx like a rudimentary tail, suggesting an atavistic regression.

The pelvis may be narrow, flat, and deformed. The breasts may be supernumerary, occupying the latero-mammal, hypogastric or inguinal regions. The supernumerary breast is often a simple nipple, which in turn can be the seat of numerous anomalies.

HERNIAS.

Hernias are frequent in degenerates; all hernias are due to an arrest of development of the abdominal wall, the traces of which are sometimes found in a normal state in animals near to man. Extreme weakness of the abdominal walls is considered as an anomaly in all races.

THE MEMBERS.

The anomalies in arms, hands, legs, and feet are those of form and proportion. Supernumerary fingers (polydactyly), webbed fingers (syndactyly), absence of fingers (extrodactyly) are important anomalies of form. Those of proportion may consist in the arms being too short or too long (most frequent). In the latter case the span of arms or length of reach is notably greater than the height. Similar disproportions are observed in the lower members. When the legs are too long they are often slender, making the individual resemble a wading bird, a characteristic of infantilism and of the eunuchs. Excessive development in length of legs is observant not only in neurotic degenerates, but in consumptives. When the limbs are too short they are oftener very thick.

The forearm, as compared with the arm, is very long, as is normal in lower races.

In epileptics there is a congenital malformation of the ulna.

STIGMATA OF THE HANDS.

The thumb has a double nail. Disproportions of fingers and toes are to be noted (figs. 4, 8). There may be an absence of a phalanx of a finger, a union of two phalanxes, a short metacarpal or metatarsal: or many fingers may be short. Disproportion of the fingers can be very marked. The fingers are compared in length with the middle finger. Thus in the normal hand the index finger reaches to where the nail emerges from the middle finger; the ring finger reaches to about the middle of this nail; the little finger stops at the last articu-

lation of the ring finger; the middle finger is longer and larger than either the index or ring fingers. In the abnormal hand of degenerates all the fingers are often too long or too short. The shortness is more common in profound degeneracy. The most common anomaly is defect in proportion of one or many fingers. Most often the ulnar border of the hand (fig. 5) is defective; the little finger and the ring finger are too short, or the ring finger has not its normal length com-

Fig. 4.

pared with the middle finger, while the little finger maintains its proportion to the ring finger. Or the little finger is too short in comparison with the ring finger, already too short. The defect of the little finger is made still more marked where its second phalanx is bent, resembling the little toe. The third phalanx of the little finger may bend toward the ring finger.

Sometimes the ring and little fingers are not only short but very slender; this defect sometimes is accompanied with very marked

Fig. 5.

weakness of the two last fingers, normally more feeble and particularly troublesome for pianists.

The thumb is most often too short, due to the small development of its little phalanx.

The decadent hand in connection with defective ears and eyes may be significant. Sometimes all fingers, except the thumb are united together into one piece, called the claws of the lobster.

STIGMATA OF THE TOES.

Most of the anomalies of the fingers appear in the toes (figs. 6, 8). If the second toe be shorter than the first, this may be due to the shoes, since it is not the case with ancient peoples. In epileptics the predominance in length of the second toe occurs in 45 per cent, while in people in general it is 10 per cent. Hammer-like toes and lateral deviations of toes are frequent in degenerates. The infantile foot,

Fig. 6.

where the toes tend to be uniform in length, is found in idiots and imbeciles. There is the clubfoot, considered by some as the result of evolution trouble, but by pathologists as the consequence of medullary lesions. Sometimes clubfoot is coincident with defective knee-pan, polydactyly and absence of great toe. Deviation outward of great toe (hallux valgus) can be considered as an anomaly of development.

Sometimes clubfoot is due to injuries of pregnancy. Flat foot appears to be more frequent in degenerates than in normal people.

Fig. 7.

Excessive volume (meglomelia) or excessive meagerness (oligomelia) of the members quite frequently are anomalies of development.

The thinness of the members is often attributed to the want of exercise, but one finds this as well in children of the alcoholic workman, as in those of the aristocracy, degenerated through other vices, or simply by defective crossing in marriage.

Anomalies of articulation, congenital dislocations of the shoulder, absence of kneepans, articular laxity, congenital ankyloris lateral deviations of the articulations and knock-knee (genu valgum) are stigmata of degeneration.

Fig. 8.

STIGMATA OF THE GENITAL ORGANS.

In general, sexual characteristics tend to be changed and effaced, and differences between the sexes become less marked in degenerates.

Insufficient development of genital organs is noticeable. Excessive development is usually due to morbid habits or pathological alterations.

The testicles may be very small (microorchides) or there may be inguinal or abdominal ectopia, morbid displacement, the different inversions, varicocele, or cysts of the epididymis.

There may be atrophy or hypertrophy of the penis; or swelling at its lower extremity, found mainly in masturbators. There may be torsion on its longitudinal axis, or a tendency of the orifice of the meatus to be doubled or present fistula, or the organ may be imperforated or too narrow, or bent down (hypospadis). The prenum is frequently short, and thus may impede coition and fecundation. The prepuce can be wanting, too long, or too narrow, constituting congenital phimosis. The penis can be united to the scrotum by a fold of the skin, forming a sort of vail, like to the membrane in webbed fingers.

The scrotum in certain degenerates has a median fissure, a vestige perhaps of arrested embryonic development.

In women the labora may be large, simulating a scrotum; a large clitoris can have the appearance of the male organ. Imperforation of the vulva, transverse or vertical closing or partitions of the vagina and doubleness of its external passage, all these may be present.

There may be congenital atresia of the vulva, rendering coition impossible, and absence of vigina or hymen.

DIFFERENCE BETWEEN THE SEXES.

Certain degenerative stigmata unite in one individual the attributes of both sexes. At the end of the embryonic life the embryo is neutral and we can not say to which sex it belongs. The differentiation begins later.

In the general conformation of the body irregularities appear, such as masculinism, feminism, infantilism, androgynism, and hermaphrodism.

MASCULINISM.

Masculinism refers to an individual possessing the fundamental sexual characteristics of a woman, and at the same time certain secondary sexual characteristics of the masculine type, as the development of hairs over the body, small breasts, narrow pelvis, etc.

The masculine woman's head has somewhat similar measurements to the man's, and is much larger than in woman.

The shoulders may be large and pelvis and breasts little developed, there is a strong voice, masculine gait, and taste for man's vigorous exercises and habits, and little inclination to feminine pursuits.

FEMINISM.

Feminism in man on the other hand is characterized by masculine genital organs little developed, feminine attitude and gait, large pelvis, prominent hips, breasts of considerable size, abundance of subcutaneous fat, delicate skin, covered with few hairs, soft voice, morbid emotion, and no sexual desires or perverted ones.

ANDROGYNISM.

But there are individuals with only a partial inversion of sex, called androgyns, who are not wholly hermaphrodites. The male or female androgyn shows defect in harmony between the accessory characteristics of the pelvis and hips, breasts, and hairy system.

The male androgyn has a large pelvis and developed breasts and no beard. The female androgyn has a narrow pelvis and a little mustache. But these types are distinguished from masculinism and feminism in that while the feminine man has large shoulders the masculine woman has narrow shoulders.

INFANTILISM AND NANISM.

Infantilism is a physical youthfulness manifesting itself only at a certain age of adolescence; there is a retardation of development principally in the organs furnishing the fundamental or accessory characteristics of sex.

Nanism, on the other hand, is defect of general development. One sees very tall youths who hold the characteristics and trait of infancy until adult life. This is due to incomplete development of puberty.

Female infantilism is characterized not only by little development of uterus, ovaries, and breasts, but also by complete absence of pubic hairs.

In infantilism the development of the hairs upon the skin is defective. The hair of the head remains fine and downy, the nails are very thin, the milk teeth remain, and second dentition develops slowly, as do the genital organs and voice. All infantiles, whatever their physical development, are intellectually backward.

SKIN STAGMATA.

Certain varied colorations of skin are seen, ranging from rose to dark red or violet or chocolate brown. Such are the different noevi due to dilatation of the superficial capillary vessels. Vitiligo, due to pigmentary trouble, may be mentioned; also melanism (change in coloration), albinism, and ichthyosis.

There is a frequence of symmetry in the arrangement of the papillary lines on the pulps of the fingers and thumbs and a relative frequence of most simple forms.

The hair of the head and hairs on the skin throughout life may have a languid appearance, an extreme fineness, like on the newly-born child. In both sexes the hairs can be rare and little developed over the parts where they appear at the time of sexual evolution. In the man, hairs may be wanting on the face and chest (feminism), in woman they may reach some development in these regions.

The development of the hairy system in woman may be regarded as a regression. There may be a complete coloration of skin (albinism), or a partial coloration (vitiligo). Or there may be abnormal and superabundant hairs over all the body (polytrichosis) or over certain parts, as the lumbar region or lower limbs (hypertrichosis).

The anomalies of the nails, especially when very thin or in a fetal condition, or absence of nails may be regarded as stigmata.

FUNCTIONAL STIGMATA OF DEGENERATION.

Arrested, retarded, or anomalous functions may be regarded as stigmata. Slowness in learning to walk, which appears to be connected with retarded evolution of the pyramid, is a stigma.

ANOMALIES OF SPEECH.

Defects of speech are stuttering, stammering, speaking through closed nose, open nose, lisping, deaf-mutism, dullness of hearing.

Defects of speech increase with age. Very few children acquire defects of speech in later life. The majority of children with such defects are backward in mental development.

Stigmatism or defective enunciation of sibilants may depend upon hereditary abnormality of location of teeth.

Bradylalia (slow and labored speech), exaggerated rapidity of speech, embololalia, anomalies of voice, and nasal sounding voice are stigmata.

ANOMALIES OF MOVEMENT.

Anomalies of movement are tics, tremblings, nystagmus (rotary movement of eye), retardation or absence of regulation of certain reflexes, incontinence of urine, merycism (rumination), which is sometimes hereditary and often manifested by the insane and idiots and in those predisposed to epilepsy and hysteria. Pavy disease and cyclic albuminuria are stigmata.

ANOMALIES OF GENITAL FUNCTIONS.

The anomalies or stigmata of the genital functions are retardation of puberty, of sexual instinct and appetite, genital reflexes, and seminal losses.

In degenerate families the stature varies more or less, often tending to nanism in the boys and gigantism in the girls.

The anomalies of menstruation, menstrual deviations, and especially total amenorrhea indicate uterine and ovarian anomalies. Habitual miscarriage is often connected with uterine malformations and uterine infantilism. Absence of lactation indicates also anatomical anomalies, especially insufficient development.

Congenital sexual perversions and especially sexual inversion are stigmata.

SENSORY ANOMALIES.

Sensory anomalies are daltonism (color-blindness) ackromatopsia (complete color-blindness) nyctalopis (day blindness), indicating anomalies of structure.

Defects in acuteness of sensibility, as analgesia and disvernerability, are stigmata.

Anomalies of sleep are insomnia, somnolence or prolonged need of sleep, and narcolepsy (attacks of sleep).

VASOMOTOR ANOMALIES.

These are morbid emotions, as explosiveness, often connected with exaggerated reflexes; tendency to blush for the least cause, often on only one side of the face. This may be considered a vascular anomaly of the skin, and is often hereditary.

Vasomotor reactions present frequent variation of temperature in degenerate children, and intense reaction upon slight physical trouble. Susceptibility to eruptive fevers, marked taste for excitants, drooping of the upper eyelid, and rotation of the pupil downward are signs of degeneration.

Left-handedness, a congenital aptitude, infantile symmetry of all movements (synkinesia), the disease of von Wayenburg, and a tendency to hemorrhage are stigmata.

One of the most frequent functional stigmata is incapacity of sustained effort.

POST-MORTEM STIGMATA.

There are doubtless a very large number of stigmata hidden during life, which might be brought to light at the autopsy table. They are the congenital malformations of the internal organs. There would be, however, great difficulty in distinguishing that which is congenital from that which is due to pathological troubles during different periods of life.

Some visceral anomalies, as inversion of the viscera, anomalies of the heart (cyanosis) and its vessels, ectopic (morbid displacement) of the kidney, spleen, and uterine deviations, due often to arrested development of walls, might be regarded as stigmata. Some consider moving kidney, which otherwise may coincide with other anomalies, as a stigma of degeneration. Certain formations of congenital origin, as paraovarian cysts, tumors of Rosenmuller's organ, cysts of Gaertner's canal, and dermoid cysts of the ovary may be considered as stigmata.

B. MENTAL STIGMATA OF DEGENERATION.

Some writers seem to consider all forms of insanity as stigmata of degeneration. But in cases of acute insanity where the cause is due to accidental injury of the head or to toxic effects of disease, or to some moral shock, or excessive mental strain, it would seem questionable to apply to these or similar cases the term "degenerate." Before entering, therefore, into a consideration of the mental stigmata of degeneration, it will be necessary to make reference, as briefly as possible, to classification of different forms of insanity. This is done with a view to finding the place of mental degeneration in such classification and its relation to mentally diseased states in general.

Classification of insanity.—Most alienists group apart the simple forms of insanity known as mania and melancholia. The majority also separate the intermittent forms, as alternate and circulatory insanity and the toxic mental disorders. They isolate also the cerebropathological or organic cerebral affections.

The disagreement commences with the classification of insanity without delirium and delirium proper.

Insanity without delirium includes obsessions, pathological impulsions, and moral insanity, three states which may be considered as stigmata of degeneration.

There are of course difficulties in all classifications of insanity. If we depend upon the symptoms alone, nothing is more variable than the outward changes in the same disease, and nothing is more common than the same symptoms being manifested by different diseases.

Those who classify mental diseases according to their causes are led to giving undue weight to insignificant and doubtful causes, for the same causes may appear to be present in diseases of different natures and, on the other hand, the same disease may seem to be due to several causes.

The pathological anatomical classification would be ideal, if there were sufficient knowledge of the real causes of different forms of insanity.

Insanity may be divided into two general classes: 1, hereditary insanity, that is, where there is a predisposition; and 2, accidental insanity, that is, where mental disease is an incident in the life of the normal individual.

But here predisposition can be used only in a relative quantitative sense, for in every disease there must be some slight predisposition or tendency, some soil or spot with little or no resistance.

Accidental causes of insanity.—An individual can become insane from a series of moral shocks, reverse of fortune, loss of a dear friend, or from an exhausting chronic affection, or acute disease with long and painful convalescence, or from intoxications, as alcoholism or morphinism, and the like. The brain can be put in such a morbid state of weak resistance as to lose its equilibrium at the least unfavorable influence.

Relation of insanity to degeneration.—But there are numbers of persons who have been subject to such conditions and who have not become insane. There must be a difference between these individuals and the others in the same environment, and this difference probably is one of predisposition or tendency, or no predisposition, or slight

tendency to insanity. Those predisposed may be divided into (1) the predisposed simply, (2) the predisposed with degeneracy.

The predisposed to insanity simply.—These have the simple forms of insanity as mania and melancholia, without troubles of the intelligence properly speaking. All these simple forms consist in general delirium, affecting the entire understanding. According to Magnan, there is no intellectuality delirium properly speaking; there are no creations due to aberrations of reason or imagination. There are elementary disorders essentially transitory. Mania and melancholia may be placed with intermediate insanity and chronic delirium.

Those predisposed with degeneracy.—These have intellectual and moral personality, transformed at its basis through the progressive influence of predisposition.

Those predisposed, but without degeneracy, have a normal brain, but fragile. In these with degeneracy in addition their mental constitution is at all times abnormal. This fundamental degenerative taint may manifest itself in anomalies of sentiment, intelligence, instincts or inclinations, or it may assume physical anomalies, the signification of which is added to the concomitant mental anomalies. All these stigmata are permanent and born with the individual, and continue until death.

Bad mental, physical, moral, or social surroundings can easily develop this degenerative taint. Even physiological moments, such as puberty, menopause, menstruation, and pregnancy may make degenerative taint manifest. Here attacks of delirium have no proper evolution; they take all forms and are substituted one for the other with the greatest facility. Those with the deepest taint are candidates for dementia.

Some of these degenerates may have brilliant minds, but they are without equilibrium; they may be eccentric, bizarre, peculiar, and original. They are superior degenerates.

Those with weak minds are distinguished according to degree of weakness as feebleminded, imbeciles, and idiots. The transitions between all these divisions are almost imperceptible.

Classes of mental degeneration.[a]—There are three orders or aspects of mental degeneration:

1. States of lucid insanity, with conservation of consciousness at base of obsessions, impulsions, or inhibitions.

2. Very advanced states of disequilibrium, with loss of consciousness, generally requiring subject to be confined. To these belong the most dangerous variety, as insanity of persecution. Others manifest a deviation or insufficiency of moral sense, and are called morally insane.

3. States of delirium: Delirium, sudden, multiple, polymorphic, protiform, rapid or sometimes of long duration, but without tendency to systematization and progressive transformation. These are curable. All forms of delirium can be observed. To this class belong religious, erotic, hypochondriac, and ambitious deliriums following the predominant ideas in the individual.

Remaining forms of insanity without degeneracy.—The final forms of insanity following the degenerative forms are states of delirium directly engendered by neurosis, as hysteria and epilepsy. These

[a] The classification of Magnan is followed in the main.

states can have a degenerative phase, which preexists in the neurosis itself. Sometimes the neurotic delirium coexists with simple insanity or chronic delirium.

Divisions of accidental insanity.—Two large divisions of accidental insanity are (*a*) organic dementia and (*b*) toxic insanity. These can be referred to their direct causes.

Insanity from intoxications, as alcoholism, absinthism, cocainism, morphinism, etherism, etc., manifest characteristics in common. To their acute forms may be applied the term hallucinatory delirium.

Mental stigmata.—The characteristic stigma of mental degeneracy is a want of harmony, a lack of balance, a disequilibrium of the divisions, properties, or faculties of the mind, as memory, perception, association of ideas, attention, etc., or generalization, judgment, and the like.

The faculties of the mental degenerate are out of gear, not intact, their harmony has disappeared. One or more faculties may predominate and some may be so developed as to indicate elements of genius, or others may be absent. A degenerate may be mentally weak, or with exaggerated emotions, or impulsive or obsessed, or have simple tics and spells.

Evolution of degeneration.—The juvenile degenerate learns to talk very slowly, the images of the words do not become well fixed in the memory. The power of synthesis is difficult to educate. There is irregularity of aptitudes and want of equilibrium.

Degenerates are very impressionable, having fears without reason, extraordinary apprehensions in certain things, unreasonable antipathies, excessive sympathies, and nocturnal terrors of every form.

There may be serious morbid motor or sensitive conditions which leave indelible traces, in connection with inflammation of the meninges, resulting in paralysis, spasms, convulsions, hemiplegia, hemichorea, symptomatic epilepsy, and the like.

From infancy to puberty the degenerate remains somewhat the same. His mental weakness may reveal itself at school. Or if his intelligence is acute, it is unequally developed, making the child a little prodigy in some ways, but defective in other respects.

Puberty.—In puberty sexuality is predominant. At menstruation there is moodishness, nervousness, or hysteria, obsessions, or menstrual insanity. In both sexes there is frequent onanism, a cause of exhaustion. The sexual function may be previous or sometimes neutral if not absent.

Adolescence.—In adolescence the degenerate is thrown more upon his own resources, he shows himself more than ever insufficient for life's struggle, for which he is poorly fortified and which produces in him pathological results. With a weak intelligence and lawless imagination, he may show the most foolish enthusiasm, burlesque inventions, religious exaggerations to mysticism, or to asceticism. Credulous and superstitious, he submits to all suggestions and becomes a victim of contagion. Laws, morality, the most respected customs, he revolts against as a restriction of his liberty, not comprehending their purpose. He is an easy victim to alcohol, morphine, cocaine, and the like.

Degenerate easily exhausted.—Life's constant struggle soon exhausts the degenerate. Extreme mental fatigue results, all labor is impossible, where accompanied with pain; he has neurasthenia, a

state of irritable weakness. In the most serious cases the degenerates become insane; mental equilibrium is broken, reason totters, conscience is obscured; chaos reigns in thoughts, sentiments, and acts, revealing what may be called the maximum of disequilibrium.

Idiocy.—The lowest type of degenerate with the most rudimentary intelligence is the idiot. His sensitive centers are scarcely developed, his sensations are narrow, and perceptions almost nil. Mentally, there is an arrest of development; the mind can do nothing of itself; life is a succession of reflexes, which do not relate to the psychical centers. The idiot is an instinctive being. He defends himself like the most inferior animals, he never acquires personality, he is an automaton. The idiot of the lowest degree is apathetic and unable to express his desires by speech or motion. The idiot of a little higher grade may be excitable, mischievous, violent in temper, restless, willful, and very curious. Speech is delayed or limited to simple words, incomplete sentences, or short phrases.

Inferior feeble-mindedness.—The next rank above the idiot is occupied by the inferior feeble-minded. These have more intelligence than the idiot, but it is very variable and incomplete. From the idiot up to the intelligent degenerate are a number of stages. The most inferior are very near the idiot but very different from the most superior, who in turn are very near the intelligent degenerate. In the inferior feeble-minded the elementary intellectual faculties can reach their full development. This class are still imbeciles; they have only a minimum intelligence, approaching that of the animals.

Superior feeble-mindedness.—The superior feeble-minded person can be a brilliant individual, offering all the elusions of a weighty intelligence, but of which the insufficiency will never fail to show itself wherever the judgment formulates the conclusions. He can collect isolated facts, but can not apply or classify them. He is not greatly different from the normal child. He may be precocious, with a great capacity for remembering dates or for arithmetical calculations—the wonder of the family.

Intelligent degenerates.—In the intelligent degenerates the higher faculties acquire much development, but very unequal, as the variety of bizarre adaptations of these faculties shows. This class possess the necessary mental qualities to become of importance, but they are unable to direct their thought and acts continually to an end. They can not coordinate the powers they have. They may reason correctly, but their actions are most incoherent.

Sometimes without motive, fluctuating and undecided, they manifest obstinacy that nothing can influence. Their disequilibrium may result from excessive development or from the richness of certain faculties. There may be strong imagination coexisting with narrow conceptions, or high morality with sincerity, and at the same time most indelicate acts. The intelligent degenerate may not be able to control and regulate his sentiments, affections, and impulses. In spite of his intellectual development he can be the toy of his lowest passions and instincts. Thus the intelligent degenerate can be rightly called bizarre, hair-brained, eccentric, and original. It is clear that such an individual without equilibrium yet with an active mind is liable to come in conflict with established customs, if not with the law itself.

Obsessions and impulsions.—Obsession and impulsion are perhaps the highest and most significant expression of degeneracy. They have been made morbid entities under different names, as emotional delirium, insanity of doubt, mania of theft, mania of suicide, etc.

Every idea imposing itself upon consciousness, in spite of the will, thus interrupting the regular course of thoughts, is an obsession.

Every act consciously performed, but which can not be inhibited by the will, is an impulsion.

The obsessed degenerate has no emotional equilibrium; sensations, images, and perceptions impress themselves with such intensity as to produce inhibition, characteristic of conscious obsession. The disorders of sentiment are the most complex; they may result in exaggerated altruism or a foolish and injurious philanthropy; or there may be an excessive egoism; or desire to satisfy some passion, dominating all other sentiments.

Pathological obsessions.—A pathological obsession is a morbid syndrome characterized by the sudden appearance of an idea, imposing itself upon consciousness in the form of paroxysms, interrupting the normal state of the mind in spite of the will, whose powerlessness is turned into intense agony and moral suffering.

As to the different forms of pathological obsession and impulsion it may be said that they are summarized in insanity of doubt, echolalia, aboulia, and coprolalia.

Insanity of doubt.—This is an obsession in the form of mental questioning. Consciousness is clear. The questions arise in the mind in spite of the will, which is agonizing. When the question has received an answer there is a momentary relief. The questions are of every kind and some are most insignificant.

In his pathological doubt the person is constantly preoccupied with the solution of these problems; he can not do anything else; his doubts cause him agony which renews itself in a paroxysm from the appearance of a new series of questions and doubts. The person is perfectly conscious of his situation; he makes desperate efforts to turn his attention away from objects he declares to be foolish; but all is in vain. Every minute brings new doubts and new efforts; the person has much moral suffering at the moment of the paroxysms. This suffering is sometimes relieved by some answer, but it is only temporary; the obsession returns with more intensity than ever. This suffering has its physical signs; the forehead is covered with perspiration, the pulse increased; there are palpitations, precardial pains, a pain in the frontal region, indicating excess of attention and intellectual fatigue.

One of the forms of insanity of doubt is kleptophobia, or the fear of stealing, which may assume all the morbid characteristics of insanity of doubt.

Aboulia.—In aboulia the degenerate feels his will power suddenly destroyed at the very instant it is necessary for him to carry out some determination. When ready to sign a paper to end an account, start out to walk, or in any condition important or otherwise, the degenerate finds himself suddenly hindered, the act willed is not performed, or if commenced, it is not achieved. All this time the mind is perfectly clear. No plausible reason exists, apparently, to explain the phenomenon. An irresistible hand seems to hold the degenerate back, so long as he struggles.

Echolalia.—Echolalia is a simple impulsion to repeat, in spite of one's self, words, phrases, or last words or phrases, which one hears. There is nothing intellectual here; it is a mere echo. The image of the word awakens immediately the motor image of articulation, and even at the moment the sensorium is warned, or before it can be appreciated, this image is objectified. The person not being able to prevent this, is seized with great anxiety. He is especially anxious at the thought of the necessary return of the impulsion. He flees the world, avoids all conversation, and becomes mute.

Coprolalia.—Certain degenerates are sometimes obsessed with obscene words, which arise suddenly in consciousness, without being caused by any association of ideas. This is called coprolalia.

These ideas have no relation to anything, and yet thrust themselves upon the attention, interrupting the regular course of thought. It is a stranger who comes to trouble the mind. Anxiety is at its height, the degenerate knows the effect which the obscene words will produce, and at the same time is conscious of his powerlessness to prevent what he feels is coming. The paroxysm approaches, perspiration is upon his brow, his face is full of agitation, his heart beats violently. Suddenly the word is forced out. Then there is a feeling of relief and calm. No word can express the moral torture these degenerates suffer.

Delirium of touch.—The subject is obsessed with fear of contact with certain objects; it is impossible to overcome this fear or repugnance. The effort, or struggle, to do so is agonizing. A momentary victory gives satisfaction.

A form of this delirium is pyrophobia, or fear of fire, or the fear of objects that can be set on fire. The fear of setting fire to is a form of the insanity of doubt and is accompanied with cruel agony; the idea can not be chased away without a long struggle. The mind is clear.

Terrors of space.—There are three forms of terror or fear—(a) an obsessed and insurmountable fear of spaces called agoraphobia, (b) a terror of restricted or limited spaces, called claustrophobia, and (c) a fear of known places or determined locations, designated topophobia, all of which are stigma of degeneration.

Dipsomania and sitiomania.—In dipsomania the impulsion to drink is irresistible. The struggle may be energetic, but it is useless against the temptation. The mind is clear, the suffering is extreme. There is relief when the impulsion has been satisfied.

Sitiomania is an impulsion similar to dipsomania, with like symptoms in respect to food.

Pyromania and kleptomania.—In both pyromania and kleptomania the impulse is irresistible, the mind is clear; the struggle is painful, in one, to resist setting on fire, in the other, to resist stealing. In both there are physical symptoms, and satisfaction on the accomplishment of the acts.

Impulsions to homicide and suicide.—In homicide, the temptation to kill an innocent or indifferent person, or even a dear friend, without motive, is irresistible. The moral suffering of the degenerate is indescribable, his continued struggle terrible. The physical reaction is marked. If the act be accomplished, it is followed by a

feeling of relief, even though the sentiment of horror remain in consciousness.

The suicidal impulsion presents the same symptoms as that of homicide.

Arithmania and onomatomania.—In arithmania there is an irresistible impulsion to count, which at times is so intense that the person counts automatically. In the paroxysms in the midst of the conscious effort to struggle against the impulsion there arises intense suffering, with habitual physical symptoms. Numeration alone can give relief.

Onomatomania has numerous forms. The most common is an obsessed and agonizing search for certain words. The mind is clear. The degenerate endeavors to chase away the idea, which he recognizes as absurd; but the obsession repeats itself, being accompanied with extreme anxiety and physical signs. The finding of the word brings the desired relief.

Oniomania and mania for play.—The impulsion to buy all sorts of things is oniomania. This impulsion is painful, but invincible, in spite of all effort, the accomplishment of which brings relief.

Mania for play, sport, or game is a condition where the player is pushed in spite of his resistance to play. Conscious of his condition, which he deplores, he struggles and suffers with certain defeat before him. The accomplishment of the act is accompanied with violent emotions, followed by satisfaction, mingled with regrets.

Sexual perversions, aberrations, and anomalies.—The number of sexual morbid states included here is enormous.

With the exception of cases where the sexual perversion is moral and so ignored by the degenerate himself, all other cases show the general characteristics of obsession and impulsion.

C. MORAL STIGMATA OF GENERATION.

Moral stigmata, in general, consist in anomalies of character, especially in infancy, as bad impulsions, violence, anger, strange vagaries of sensibility, refractory to all reform, and instinctively perverse acts, as theft, murder, brutality, coarseness, etc.

Evil tendencies, showing stigmata, may be awakened or developed by intoxicants, as alcohol, opium, hashish, cocaine, chloral, and tobacco (cigarettes).

Acts in which there is permanent tendency, disposition, or inclination to commit crime constitute the most serious forms of moral stigmata. Such stigmata are: Crimes against person, as homicide, murder, assault, torture, robbery, rape, kidnaping, seduction, blackmail, etc. Crimes against property, as burglary, arson, larceny, embezzlement, forgery, extortion, destroying property, etc. Crimes against chastity and decency, as incest, sodomy, exhibitionism, and other sexual perversions.

Any act is a moral stigma of degeneration in which there is a permanent tendency or inclination: To indulge in any form of vice, dissoluteness, depravity, profligacy, vileness, or loathsomeness; to use any form of deception, as lying, fraud, trickery, imposture, etc.; to any kind of meanness, villainy, baseness, etc.; to extreme selfishness, self-love, egotism, stinginess, covetousness, etc.; to cowardice, pol-

troonery, extreme distrust or suspiciousness, etc.; to any form of cruelty, brutality, inhumanity, etc.; to any form of vulgarity, coarseness, etc.; to any form of malice, hatefulness, ill-will, revenge, etc.; to laziness, indolence, listlessness, dilatoriness, etc.; to ostentation, display, pomposity, vanity, or arrogance; to frivolity, silliness, giddiness, etc.; to run into debt, insolvency, etc.; to wastefulness, extravagance, etc.; to uncleanliness, filthiness, etc.

DISEASED MORAL DEGENERATES.

Diseased moral degenerates are those with a disequilibrium of the sensibility and the emotions. They react with great energy from all causes which affect the emotional side of their individuality. The modes of reaction are of two orders, (1) depression and (2) excitation.

To depression belong cases of moral hypochondria, states of great perplexity, in which the person lives continually subject to the common causes of simple depression, as chagrin, reverse of fortune, etc.

Those who react by excitation, at the least solicitation are the prey of an erethism which manifests great irritability, violent outbursts, and acts so brisk that they seem irrational.

Moral insanity is a stigma of the most profound nature.

Certain degenerates seem unable to adapt themselves to the rules of morality; they know these requirements, but have no feeling responsive to them. Such degenerates are called morally insane. The degrees of moral insanity run from simple obscureness of insight to complete indifference or obtuseness to moral sense or feeling.

The bad instincts may exercise tyrannical influence during life, constituting a dangerous infirmity. Conscience may be very weak or nil.

SOCIOLOGICAL STIGMATA.

Sociological stigmata are fundamentally a form of moral stigmata, and are due to a permanent inadaptation to surrounding conditions consisting in manifestations, or acts, that are detrimental to society. The want of adaptation, causing such acts or stigmata, may be:

Total or partial. In the total, the individual is lacking in so many elements of adaptability that it is impossible for him to live in society.

Partial inadaptations may be racial, natural, and individual.

A person of one race is often not adapted to live among people of another race. In the lack of family instinct, absence of love for children is a greater stigma than absence of love for parents, though both wound the most intimate feelings.

Social inadaptibility depends largely on the surroundings of the individual. A person may be living a quiet and inoffensive life, in complete harmony with his environment, when through some misfortune everything is changed, and if unable to adapt himself to the new conditions he succumbs and becomes an enemy of society. If he has been living for a long time in harmony with his conditions, this very fact makes it more difficult to overcome new hardships and temptations.

RELATION BETWEEN DEGENERATION AND ECONOMIC SYSTEM.

Every human being should have sufficient food and clothing, a healthy habitation, opportunity to be clean, no requirement to work beyond his powers, and freedom from excessive anxiety. Such surroundings would be simply normal. But it is doubtful if half of the population are so fortunate as to have such an environment. The more the individual is deprived of such normal conditions the more he is liable to deteriorate mentally, morally, and physically. The poor are badly and insufficiently nourished, which is due to ignorance as well as want of money. They become feeble through malnutrition, are rendered more susceptible to disease. Thus women with rickets often have a narrow pelvis, which is a stigma of degeneration and can be the cause of injury to the child's head at birth.

The inability or unwillingness of many women to nurse their own children favors the development of degeneracy in their offspring. Such women place the pleasures of society above the duties of motherhood, which indicates extreme selfishness, a stigma of degeneration.

A degenerate, if possessed of means, can easily marry, but his children will probably be degenerates. On the other hand, many healthy and strong individuals are prevented from marriage because of their very limited means.

Again, militarism takes the strong and destroys them by war or returns them to society enfeebled and diseased. In the meantime those too weak or defective for military service have had opportunity to reproduce their like at home.

Many of the causes of degeneration in the poorer classes are not found among the well to do and wealthy. Yet the lazy and indolent ones are prone to indulge in all kinds of excesses, which can lead to degeneration.

In the strenuous life of the middle classes, where competition is at its maximum, there is constant strain on the nervous system, and if misfortune threatens fear pervades the mind continually. In the liberal professions, also, competition has become so great that the strain on the nerves not infrequently results in neurasthenia, which is chronic fatigue.

The authorities are almost unanimous in the opinion that alcoholism is a prolific cause of degeneration. The spread of syphilis by means of prostitution, which in its turn is influenced by economic conditions, is one of the most insidious causes of degeneration.

ECONOMIC STIGMATA OF DEGENERATION.

The present economical system of the world, though it may be the best possible under the conditions, seems to tend toward a weakening of the social instincts. The spirit of domination and insensibility for the misfortunes and defects of others among the upper classes and the servility and jealousy of the lower classes create a state of unrest and disequilibrium which are mental stigmata of degeneration. This condition is unfortunately increased by the contrast, on the one hand, of luxury, often accompanied with laziness or debauchery, and, on the other hand, extreme poverty with its consequent misery.

The spirit of domination and insensibility over against servility and jealousy are economic stigmata of degeneration.

Poverty and the fear of poverty (often worse) are also stigmata of an economical order, and in weaklings especially are the occasion or cause of innumerable social evils. Thus child labor increases, and with it a tainted morality due to its bad, if not unnatural conditions, hindering normal development and producing premature agedness in the young.

The parent has charge of the child's education. The public pays little or no attention to it. The consequence is that large numbers of children are brought up by wholly incompetent persons. For the children of the lowest classes education is hardly possible, owing to lack of means and absence of both parents from the home.

Extreme poverty, moral abandonment, and educational neglect of children in the lower classes and cupidity in the upper classes are economic stigmata, giving rise to much misery and crime.

CIVILIZATION AND NERVOUS EXHAUSTION.

Civilization, the development of science and industry, and the economic system are the result of adaptability to environment. Each new effort of adaptation, each advance of that which is called civilization, is a new cause of exhaustion, which always acts with more intensity upon the feeblest individuals, who soon become incapable of continuing the struggle and succumb either to general troubles of nutrition or to degenerative tendencies, manifested in different organic diseases or functional defects.

In this struggle for existence, especially in the cities, it is the central nervous system which bears the greater burden of the work of adaptation. It should be remembered that exhaustion of the nervous system can come from physical as well as from mental strain. One of the main effects of such exhaustion is incapacity of sustained effort, a stigma of degeneration. It is true that those congenitally healthy usually recuperate from the exhaustion. But if there be added privations of all sorts, the exhaustion may become more profound, and not only favor individual decay but bestow morbid aptitudes upon the generation which follows.

EVIL EFFECTS OF LONG HOURS OF LABOR.

Too long and too severe work, to which the laboring classes are often forced, bring on conditions that tend to develop degeneration. For the nervous system is overstrained, causing a certain irritability, which later may give rise to an abiding weakness or languor, which can be accompanied with a dull headache or even inability to think clearly. If excessive work be continued a long while, soon the whole body will be involved, the heart and larger vessels will be injured, circulatory disturbances may appear, as swelling in different parts of the body, especially in the feet, and also there may be vomiting of blood. The brain ceases to act normally, so-called cerebral symptoms appear, as dizziness, whizzing in the ears, deafness, defective sight, paralysis, and apoplectic seizure. Likewise, liver, kidneys, and the digestive tract are involved in the general weakening process. The muscles also loose their strength.

Not only overwork but its monotony is a cause of physical and mental fatigue resulting in deterioration. The less variation in work

the more tiresome it is, as it requires only the use of the same muscles, while the other muscles, being unused, may become dwarfed. The effect upon the mind is still worse. The specialization in modern methods of production, which requires an individual to do one thing only, is extremely monotonous. Thus in the making of shoes each man has one or two parts only to attend to, requiring the same muscular movement, which he repeats day after day. This also makes him unfit to do anything else. And to add to his misfortune, as soon as he begins to grow old he is very liable to be replaced by some younger man, and thus becomes helpless and dependent. To cast a faithful man out in this way is wrong in the very nature of things. The ignoring of people simply because they are old is the result of extreme selfishness, a moral stigma of degeneration.

The present economical system causes women and children to seek employment outside, which gives rise to conditions leading to degeneration.

Many women are obliged to work at trades ill adapted to their nature. The fear of losing their places and the impossibility of living without their wages cause many to work almost up to the last moment before giving birth to a child, and to resume work a very short time after confinement. This can produce very serious results both to mother and child.

CRIME AND MORAL DEGENERATION.

The moral degenerate often becomes a criminal. Unable to direct his mental operations, slave of his impulsions, or sentiments, which make him partially automatic and suggestible, it is easy to comprehend how he may, on the slightest temptation, be led into crime.

Many criminals possess the marks of degeneration. No one has established this better than Lombroso and his school. Yet many degenerates are not criminals and probably would never commit a criminal act. Nor do all criminals have the stigmata of degeneration.

Criminals may be said to be inadapted to society. This want of adaptation may be permanent or temporary; in one case it is due to inward nature, in the other to environment. But the lack of adaptation is a stigma of degeneration only when it is permanent.

The normal man has a certain capacity sufficient for the exigencies of life. This capacity is wanting in the criminal and the degenerate, and is also wanting in a more or less degree in children, aged persons, and insane.

A man can be a moral degenerate and have a criminal nature, though he may not have committed any act which could be regarded as a sign or stigma of either. He may have had immoral or criminal tendencies in him, but a good home in early life and like surroundings later on may have saved him from falling.

Incapacity of sustained effort is one of the most common stigmata of degeneration. Degenerates therefore, in addition to the usual need of subsistence, have special wants for the relief of their decaying vitality. They are thus often forced to depend upon others, as they are incapable of supporting themselves. They accomplish this by dishonesty or violence. Thus it is that degeneracy increases crime. The more an individual, or race, becomes feeble, the more its need of stimulation or excitation, and each excitant only leaves it more ex-

hausted still. The degenerate is attracted by the very things that injure him, which increase his degeneration and tend to eliminate him. The alcoholic, the gambler, and the libertine are similar examples only too well known.

DEGENERATES IN PRISON.

To gain an insight into the actual relation of degeneration to crime, there is perhaps no better way than to give the divisions of prison population with the classes and proportion of degenerates. As an illustration the prisons of Paris and suburbs may be taken. In these prisons the inmates are of two classes, those who are fixed there and those who form a floating population, consisting of persons who may have been convicted once or twice but rarely more, like the wine merchant who is imprisoned for adulterating his product, or the bank clerk who at the time of great need borrows money from his case and forgets to return it.

These and similar criminals are only prison transients. Generally one or two days' confinement are enough to make them more honest, or at least more careful.

Those who are permanent inhabitants of prison are often habitual criminals who have been convicted many times. These may be divided into two classes: The infirm, beggars, and vagabonds, persons incapable of earning a living and to whom prison is a refuge. They are seldom convicted of theft, but continually arrested for begging, or vagrancy. The second, or permanent, class are the real criminals, those whom theft, vagabondage, drunkenness, rape, and murder continually bring back to prison. These are degenerates.

If we eliminate the floating population of prisons, most of those who remain are sons of alcoholics. Father alcoholic, son criminal and usually a thief.

The habitual criminal shows the influence of parental alcoholism, manifests absence more or less complete of moral sense, and exhibits the influence of prison life.

The class of degenerates most frequent in prison are the weak-minded, then follow superior degenerates. The least numerous are the imbeciles.

The weak-minded are without intelligence and judgment, with narrow ideas and mechanical memory, with feeble will powers, incapable of attention, without imagination and giving passive obedience to the suggestions of others.

The superior degenerate is relatively rare in prison. He is without equilibrium, yet intelligent, but his mind acts in an unequal and sudden way. He may have generous ideas and high ideals, but he is incapable of sustained effort, and so unable to carry out his principles. His eccentricities suggest the need of an asylum rather than a prison; but being without equilibrium he may not know how to repress his passions and so commits crime.

In his youth the imbecile is most frequently placed in the asylum, but his mind being moved almost wholly by instinct and impulse and thus being liable to commit some offense, he may find his way to prison.

STIGMATA OF CRIME ACCORDING TO THE ITALIAN SCHOOL.

According to the Italian School of Criminology, the habitual criminal is a born criminal and presents certain physical and mental deviations from the normal man that are characteristic. Some of the more important of these deviations or stigmata are very small or very large head and a general lack of symmetry, as saddle-shaped head (clinocephalus), pointed or sugar-loaf head, a twisted-shape head (plagiocephaly), sometimes called kidney shaped.

With the anomalies of the skull go naturally those of the face. As the bird face with the very small head, the flat forehead of the pointed head, a crooked and flat nose, prominent eyebrows and jaws, asymmetry of the orbits, slanting of the teeth, deformities of lips and gums, lower jaw projecting beyond the upper, and many irregularities in the shape of the ears.

Of the deviations or stigmata in the rest of the body might be mentioned excessive or dwarf growth, unequalness of both halves of the thorax, club-foot, club-hand and many anomalies of the genital organs. These are some of the main anatomical stigmata, claimed to be characteristic of habitual criminals.

Some of the functional irregularities or stigmata are: obtuseness of sensibility to pain (analgesia), incapacity of blushing, color-blindness, left-handedness and abnormal sexual impulses.

Mental anomalies consist in a weakened intelligence, or unequally developed. There is an obtuseness to or absence of kind feeling or altruism, a moral color-blindness, with an incapacity for repentance or for improvement, an inconstancy and changeableness in feeling, and from childhood up a permanent inclination to immorality and maliciousness.

It will be admitted that all of these stigmata are also stigmata of degeneration. But that they are characteristic or peculiar to habitual criminals, is disputed by the great majority of authorities and is therefore a question that can be left to the future.

HABITUAL CRIME.

A habitual criminal is a moral degenerate. If a man deliberately commits a second murder, he is in all probability a moral degenerate, and if the death penalty be in force, it should be carried out in his case. Otherwise he should be imprisoned for life. He should be eliminated from society forever.

One who commits the same crime several times has probably a sort of criminal monomania, or irresistible impulse. For the most of habitual criminals, or recidivists, vary the nature of their crimes.

HABITUAL VAGABONDAGE.

There are beggars who are not vagabonds and vagabonds who are not beggars. The first class are not dangerous because they remain in the same place and are known to the authorities. They are the crippled, blind, women with children, the abandoned, the aged and infirm, and, in general, those unable to earn a living. They are simple objects of charity. These should not be allowed to beg. All begging should be stopped.

The vagabonds who do not beg, necessarily steal. They conceal their identity to escape justice. Against these the laws should be enforced with vigor.

There are those who are both vagabonds and beggars. They do not steal habitually. Some of them are convicted as many as 40 times for mendicity or vagabondage. These do not steal, but travel much, begging their way.

There are those who were brought up with habits of idleness, and those who are natural vagabonds. There are those who commenced with means of existence, but who have acquired habits of dissipation incompatible with regular work. They became lazy and debauched, are libertines and drunkards, and finish with a criminal career. Three-fourths of recidivists are without resources and power of direction. Still they can be helped by work, as shown in the Belgian agriculture colony, and thus kept from injuring the community.

CRIMINAL RELAPSE.

The regularity and frequency of falling back into crime is a well-known fact. The number of criminals who continue to commit crime varies greatly in different countries, running from 20 to 80 per cent. Criminal statistics indicate that relapsing into crime increases as civilization advances.

Relapsing into crime is more constant in women than men.

The following table is sufficient to illustrate the amount of criminal relapses or repeated crimes:

Recidivists:	Per cent.
Germany, 1882	24.9
Austria—	
1880	42
1882	49
1886	51.6
Italy—	
1878	10.5
1888	32
England—	
1882	20
1888	30

GENERAL CHARACTER OF REFORMATORY INMATES.

The general character of young criminals, as given below, is taken from a report of the New York State Reformatory. The relative per cent of degeneration is approximately indicated under the terms "perverse," "insanity," "epilepsy," "drunkenness," "without common sense," and "without sensibility to moral impressions."

Character of inmates.—Perverse, 56 per cent; slightly good, 39.6 per cent; doubtful, 1.8 per cent; good, 1.7 per cent.

Hereditary.—Insanity epilepsy, 13.7 per cent; drunkenness, 36.7 per cent; doubtful, 11.1 per cent; moderate, 38.5 per cent.

Natural capacity.—Below the average, 2 per cent; average, 21.7 per cent; good, 38.7 per cent; excellent, 37.6 per cent.

Common sense.—Without common sense, 43.2 per cent; with little common sense, 28.6 per cent; ordinary sense, 25.2 per cent; with good sense, 3 per cent.

Moral condition.—Without susceptibility to moral impressions, 36.2 per cent; with little susceptibility, 36.1 per cent; ordinary susceptibility, 23.1 per cent; special susceptibility, 13.5 per cent.

D. TREATMENT AND PREVENTION OF DEGENERATION.

In the general treatment and prevention of degeneration, it is to be remembered that the degenerate is weak and incomplete, and that his favorable aptitudes should be developed in order to counterbalance his imperfections.

CAUSES OF DEGENERATION.

Before considering methods for amelioration or prevention, it may be useful to mention briefly some of the main causes of degeneration.

The general causes of degeneration are:

Consanguinous marriages.

Congenital or acquired defects of parents, who can become tainted from intoxicants, infectious and nutritive troubles.

Ill-sorted marriages, where either husband or wife is too old or too young, or there is too much difference in their ages, or where they belong to races too far apart.

Defects in hygiene of fecundation as from drunkenness.

Hygienic defects of gestation as intoxications and infections and moral and physical shocks.

Hygienic defects in infancy as insufficient or badly regulated feeding, etc.

Bad economic conditions in a commercial age are perhaps indirectly a frequent cause of crime leading first to pauperism which for many, who are morally weak, is but a step to crime.

METHODS OF TREATMENT.

For the different degrees of feeble-mindedness, systematic training, including special instruction and education is indicated.

Physical hygiene is of much importance in the form of warm or cold baths. Gymnastic exercises adapted to the bony and muscular system, outdoor exercise and manual labor (out doors) etc., are beneficial.

MENTAL TREATMENT.

The mental treatment must be specially adapted to individual cases, that each child use the faculties he has in trying to develop those that are weak. The sensory method should be employed, making the senses serve to cause ideas to enter into the mind. Mental treatment belongs to the special province of the teacher and pedagogue, who would direct as to details in educational development.

MORAL TREATMENT.

Moral treatment has been greatly neglected. Theoretical moral ideas should be given by conversation, dissertation, and reading. There should be stimulative encouragement and kindness with firmness.

Each one capable should be taught some trade with the idea of self-support.

SOCIAL TREATMENT.

In the treatment of degeneration we have to protect the degenerate against himself, and consequently to avoid the danger of his social environment.

Degeneration might be gradually eliminated by prevention of consanguinous marriages. In cases of hereditary evolution this probably might succeed. But degenerates are inclined to marry one another. Every medical man should advise against such marriages. There should be a Federal law preventing them.

ECONOMIC CONDITIONS MOST POWERFUL.

The inequality of conditions caused by intense need in the struggle for existence, poverty, alcoholism, overpressure, unhealthy trades, tenement-house life, slum environment, adulteration of foods, epidemic and contagious diseases, and especially all economic conditions that tend to oppress the weak and ignorant and bring injustice to the poor, are most detrimental in that they produce conditions which favor the increase of all forms of degeneration.

EFFECT ON POPULATION.

Economic conditions also have great influence in increasing or decreasing the population. But the quality of population, as distinguished from its quantity, depends much on the hygienic conditions, gestation, and infancy. It would be difficult to regulate such conditions by law which might make sexual liberty subject to rules of science. But the one great difficulty of all such proposals is that every restriction of sexual liberty is an obstacle to the reproductive function itself.

SURGICAL PREVENTION NOT ENCOURAGING.

The idea that the idiot and imbecile will remain so all their lives has given rise to the thought that their arrested development is connected with premature cranial systanosis. Surgical methods have been proposed as a means of relief. But the results thus far are not encouraging. The idiots' brain may be as defective as his cranium. The cranium is at the service of the brain at first and follows its expansion. The little head may be so because the brain is small; in this case surgery would be of doubtful utility.

It has been proposed to resist the different manifestations of degeneracy by the most severe measures, as prevention of marriage where there are personal stigmata in the parties concerned or in the families involved. Surgical sterilization and castration have been suggested. But such measures seem at present unpracticable, if not barbarous.

EFFECT OF EMBRYONIC CONDITIONS.

Those conditions which injure the nutrition of the embryo tend to cause deformities or monstrosities. Such conditions at the same time cause an arrest of development in embryos which preserve their normal form. It seems that the malformation is a correlative to the arrest of development which characterizes insufficiency of nutrition.

It would seem, therefore, that degeneration, the loss of hereditary qualities, and the production of monstrosities can only be combatted by conditions which are favorable to nutrition.

If half of an egg be varnished in the direction of its long axis and then placed in the incubator and the part varnished be turned upward, where the little cicatrix is, nutrition will be diminished in the region of the germ and development retarded or arrested.

If the part varnished is turned downward the upper half seems to profit from the limitation to the nutritive exchanges and the embryo develops more rapidly. This influence of varnishing of the lower half of the egg, which is capable of accelerating the development of the embryo, has also an effective action when the egg has been subjected to an influence capable of retarding evolution; that is, it diminished the number of anomalies.

Perhaps the most serious hindrance to nutrition is alcoholism. Any measures that would lessen this evil would be of great value from the point of view of degeneration.

Nature finds but one remedy for degeneration of every form—it is the elimination of degenerates. One can not do better than by aiding her at least in one respect—that is, in restraining reproduction of degenerates, and one of the best methods, as already indicated, is the enactment of laws preventing consanguinous marriages.

The importance of degeneration lies in the probability that it is the underlying cause of many social evils, as crime, anarchism, and other social diseases.

XXII.—ANARCHISM.

A prominent social evil of the present day is anarchism. It assumes different forms. There are the practical anarchists, who are thieves, plunderers, or assassins. The last class are extreme revolutionists.

There are the intellectual anarchists, who often have great talent and express their ideas by the press and in song. There are the colporteurs, who mingle with the working men and others, selling or distributing anarchistic literature.

Anarchistic companies form social groups, and endeavor to produce agitation. The practical anarchists have several divisions. There are the exalted, the fanatics, the revolutionaries, whose susceptibility to all excitation from literature is extreme.

Then follow the unbalanced, those without equilibrium, who are like novices, whose faith does not stop until martyrdom; these are the most dangerous, but fortunately the least numerous. Then there are the malefactors, who conceal their robberies and assassinations under the cloak of anarchy.

According to Lombroso a large majority of anarchists are either criminals or insane. This is indicated by their use of slang, common to criminals, by tatooing, frequent in the habitual criminal, and by a general defect in moral sense. The exploding of bombs in theaters, restaurants, or other public places, thus injuring or killing inoffensive citizens, shows brutality and lack of moral feeling.

ANARCHISTIC METHODS.

Anarchy has a profound hatred of present society, detestation of authority, and a burning desire to initiate a new era for social life. The anarchist desires a violent transformation of old social forms into new ones.

In order to accomplish this the anarchist makes preparation by the manufacture, detention, or transportation of means of destruction. Then comes the psychological preparation, by inciting attempts on the lives of particular individuals, directly by speech, or by the press; indirectly by example or by apology for crime, or by ridicule.

Van Hamel, one of the greatest European legal authorities, says "that the anarchistic doctrine is a social theory, like any other. One can abhor its nihilistic conclusions and ridicule its pretensions and absurd illusions, but, according to modern law, no one can be prevented from formulating and proclaiming his theories. The existing institutions are not infallible; all are destined to reform; there will always be those who attack society and those who defend; it is a struggle of ideas, and can not be prevented."

The statement of this eminent authority, that no one can be prevented from proclaiming his theories, may be accepted as a general proposition, but under special conditions, where such proclamation incites to disorder and crime, the State has a right to prevent it.

Authority claims the right of self-defense, to defend the social institutions, as the family, prosperity and religion, etc. It creates numerous means to carry out its functions, as the law, the magistrate, army, legislation, and executive power. The anarchist attacks all these institutions.

BELIEFS OF ANARCHISM.

The anarchist believes in the absolute freedom and spontaneity of the individual; that men are not bad by nature, but social institutions have made them so. The anarchists have unlimited confidence in human nature itself, which, according to them, will cause all men to have self-respect and mutually aid others without any need of prescription or authority.

The anarchistic theory depends mainly on the emotional nature, to such an extent as to force its adherents to unbridled fanaticism.

ANARCHISTIC CRIME.

The anarchistic crime is propaganda by act, which in a large party of adherents comes from anarchistic ideas and sentiments, and said act is committed with a double purpose of destruction and terrorism. Such acts not only endanger present society, but prevent peaceful evolution of social institutions.

We all know that laws and customs cover many injustices and irrational irregularities. We are all desirous of discovering their causes and changing them. But whatever reforms are needed must not be by brutal force, by arms, or by blind explosion of bombs, but by thought, reason, and feeling.

The right to punish depends on (1) social defense and (2) danger to society. The means of prevention and repression should be based

upon the study of the causes of anarchism. In principle and in fact anarchistic crime is individual, and not in collusion with others. The real anarchist is a fanatical criminal.

Some anarchists have characteristics of habitual criminals. It is clear how anarchistic fanaticism can influence pathological or neurotic minds, especially when suffering from poverty or injustice. Some anarchists are either criminals or insane, or both. Some are on the border line of insanity, of an uncertain and vascillating nature (a stigma of degeneration).

The fanatical anarchists may be criminals by passion, who, having unstable natures and being under the influence of unfortunate social conditions, as want of regular employment or poverty, are easily inflamed by anarchistic literature to such an extent that most terrible crimes can result.

PREVENTION OF ANARCHISM.

To lessen or prevent anarchism, in the opinion of some, can only be done by the prison or death penalty. This method may be the most effective for certain anarchists. But for anarchists who seem to be mentally abnormal, manifesting a lack of equilibrium or other signs of degeneracy, it is a question whether such severe penalty will contribute most to the good of society. For not only are many anarchists more or less mentally abnormal, but they have strong altruistic ideas. Many of this class are misled and hysterical. Some are voluntary suicides, because they commit crimes for which they expect to receive the death penalty, which they may regard in the light of martyrdom.

FANATICAL ANARCHISM.

Fanatics and nervously diseased persons, instead of being suppressed by the severest punishments, have their altruist aberration and thirst for martyrdom increased. In every class of society there are always persons who admire anyone they believe to be a martyr. It is a pleasure for martyrs to be persecuted, to believe themselves victims of the arrogance, cupidity, and perversity of men. For such anarchists the more severe the punishment the greater the glory. Some are honest fanatics, who never committed a crime before, but are blinded by political passion and, like the ancient martyrs, are only spurred on by the punishment of death. This fanatical class of anarchists—the most dangerous of all—are without emotional equilibrium, and unbalanced morally. This mental, emotional, and moral state of disequilibrium is a stigma of degeneration. The fanatical dynamiter, who acts through perversity, will make every preparation to escape. But one who is obsessed with his idealism, knowing in advance the certainty of death, is not concerned as to his personal safety. History and human nature show that violence only tends to produce violence. This is specially true in the treatment of fanatics. When any ruler advocates violent methods or allows them to be practiced, in the solution of social questions, there is no better way of inciting anarchistic fanatics to direct their forces against him. For the idea of death only spurs them on to sacrifice themselves. There are always, in every country, a large number of minds with more or less anarchistic tendencies, which, if only latent, are liable to be awak-

ened and developed by governmental violence. Thus Russia, France, and Spain suffer most from anarchistic crime.

But it may be said that these countries have been forced to violent methods of repression by the anarchists themselves. But the most elevated classes, the most powerful and richest, who constitute the governing power, should follow reason and calmness, and not resort blindly to violence; for the electric chair and gallows have no terrors for the fanatic.

Exile and deportation are perhaps the most rational methods of punishing anarchists.

In the case of anarchists who are monomaniacs, epileptics, or mattoids, hysterical or obsessed, confinement in an asylum for the criminal insane might be effective. Martyrs are heroes; but the insane are ridiculed, and, as a rule, a man ridiculed is not dangerous.

Some countries are so wisely governed that anarchy can not take root in them. All countries might unite in the treatment of anarchism by such methods as having general photographs and measurements of all anarchists and an international obligation to give notice as to their movements.

A palliative measure against anarchists, criminals by occasion, where criminality is due to poverty, contagion or passion, would be to remedy the chronic uneasiness and ill-humor of a country which gives to anarchy its real base of action. The general disease should be attacked in its roots, from which arises the local disease.

SOCIALISM AN ENEMY OF ANARCHANISM.

Socialism is one of the greatest enemies of anarchism, for it believes that neither bomb nor sword can accomplish anything; that the evils do not come from riches, but are the product of the present economic system. Socialism indicates foolishness of anarchist principles by showing that every new political or economical form arises only after long preparation. Just as an epidemic strikes the poorest and most filthy places, so anarchy develops and becomes bold in countries badly governed.

LAWS AGAINST ANARCHISM.

To what extreme laws should go against acts of anarchistic preparation may be questioned; but on the ground of the right of society to protect itself and in accordance with criminology, almost any extreme can be undertaken by society or government that tends to protect it from a dangerous enemy. However justifiable any extreme measure may be, it may not always be wise to enforce it, that is, it may not lessen the evil intended.

But it may be said, to stop the publication of anarchistic ideas is to attack the liberty of the press. But liberty never meant absolute liberty; liberty is relative to the conditions. In the opinion of many there is too much liberty of the press already. If a certain degree of liberty is detrimental to society, or the State, the State has a right to stop it. This does not mean that extreme measures are always necessary. But if temporarily necessary only to the preservation of the State, the State has a right to protect itself against them; it has a right to self-defense. The State on this point should not hesitate

for a moment. Against anarchists who are common criminals the laws should be exposed in the usual way. England, a country where crime is said to be decreasing, enforces its laws rigidly and promptly against all criminals alike. England is the one country most free from anarchistic crime, though many anarchists sojourn or reside there.

It is true that the severity of punishment against the fanatic criminal may vary in its effect, according to the individual. The severity of punishment will stop some. Others, as we have seen, will have their hatred of society increased and their desire to become martyrs stimulated. But this is not sufficient reason for not enacting most stringent laws against anarchism. All human nature is the same, and many anarchists—perhaps a large majority—fear severe penalties. The fact, then, that a few of the fanatical anarchists would be encouraged to sacrifice themselves is no reason against stringent legislation. The probability is that this particular type of fanatical anarchist will carry out his crime without the least regard to stringency or laxity of law. But this type represent a very small number of anarchists.

XXIII. QUESTIONNAIRE, GIVING LISTS OF PHYSICAL AND MENTAL TESTS, AND DATA SOUGHT CONCERNING INMATES OF REFORMATORIES, PRISONS, SCHOOLS FOR THE BLIND, DEAF AND FEEBLE-MINDED, AND IN INEBRIATE ASYLUMS.

As an introduction to the questionnaire, we will give some physical and mental tests recommended by specialists, and also a schedule used by the author in patho-social and other investigations. The remaining lists of data to be sought are selected from those used in the leading institutions of our country for the abnormal and special classes.

In a new branch of research, such as modern experimental psychology, questions as to what data and methods are the most important might bring forth very divergent, if not opposite, answers. It is therefore very desirable to have a list of tests or data to be gathered, which are generally agreed upon.

The special list of physical and mental tests below was recommended in a preliminary report by the committee of the American Psychological Association, the highest authority in our country.

These tests are not expected to take more than one hour for each person.

1. Physical and Mental Tests Recommended by the Committee of the American Psychological Association.

PRELIMINARY DATA.

Date of birth; birthplace; birthplace of father; birthplace of mother; occupation (including class in college, or, if not a student, the last educational institution attended); occupation of father; any measurements previously made.

Color of eyes; color of hair; right or left handed.

Mother's maiden name; number of brothers; sisters, order of birth; age of parents at birth; birthplace and occupation of grandparents.

Two schedules of observations and records to be filled in, one by the recorder and one by the subject, as in the Columbia tests, with such modifications as experience shall make desirable.

A blank to be filled in by the recorder, noting asymmetry of head or body, color of eyes and hair, complexion, degenerative or other stigmata of head, eyes, ears, mouth, teeth, hands or feet, posture, gait, manner, coordination and speech, indications of intellectual, emotional, and moral characteristics.

PHYSICAL MEASUREMENTS.

Height, weight, and size of head; breathing capacity; height sitting.
The measurements should be made in the metric system. The weight should be taken in ordinary indoor clothing. The height should have the height of the heel subtracted. At least the length and breadth of the head should be measured.

KEENNESS OF VISION.

The maximum distance at which diamond (4½ point) numerals can be read with each eye singly.
The illumination should be in the neighborhood of 100 candle meters; about eight out of ten numerals should be read correctly at the rate of about two per second. The minimum distance should also be determined, if possible.
In addition or as a substitute, drawing a series of forms as recommended.
Use Snellen test types.
Some other substitute for these tests, to be suggested after satisfactory trial.

COLOR VISION.

Select as quickly as possible four greens from a series of wools; measure the time; if long, make further tests.
Combine with test of rate of perception by requiring subject to name, as rapidly as possible, a series of colors, either wools or papers.
Use the chart exhibited at the World's Fair.

KEENNESS OF HEARING.

The distance at which a continuous sound can be heard with each ear singly.
Use some artificial external meatus if the test is to show small differences in sensibility.
The sound should be from a watch reduced to a standard. An arrangement should be used by which it can be periodically cut off without the knowledge of the subject.
Use for this a stop watch. The stop watch can be manipulated so that the time is recorded, showing how long it took the subject to decide that the watch has stopped.

PERCEPTION OF PITCH.

Adjust one monochord or pipe to another, the tones not to be sounded simultaneously.
Select a match from a set of forks, making a fixed number of vibrations per second more or less than a standard, e. g., standard 500 v. per second; other forks 497, 497.5, 498, 498.5, etc.; 500, 500.5, 501, etc. The test can be made with two Gilbert tone testers.

FINENESS OF TOUCH.

The aesthesiometer is unsatisfactory; the discrimination of roughness of surfaces and touching a spot previously touched should be tried.

SENSITIVENESS TO PAIN.

The gradually increasing pressure that will just cause pain. The point or points in the body to be used to be agreed upon.

PERCEPTION OF WEIGHT OR OF FORCE OF MOVEMENT.

Arrange a series of weights. With and without sight.
Make movements of equal force and determine the error.
The best method still to be developed.

DYNAMOMETER PRESSURE OF RIGHT AND LEFT HANDS.

In place of or in addition to the ordinary dynamometer test make movements of the thumb and forefinger and continue as rapidly as possible for fifteen seconds.
Use mechanical counter for this and take reading at end of every minute.
Thumb and finger dynamometer. Record best and worst of five trials.

RATE OF MOVEMENT.

Distance of 35 centimeters. One preliminary trial with right hand in extension, then two trials in succession of R. E., L. F., L. E., R. F. Collate shortest of two trials under each typical movement.

FATIGUE.

Muscular exertion, as described above; intellectual exertion.

WILL POWER.

The ability of the subject to respond after fatigue has set in to a suggestion of the experimenter with an extra effort of will.

VOLUNTARY ATTENTION.

Test by simple mental operations under distraction. Coincident variations in psychophysical process.

The modifiability of the knee jerk, or of a sustained bodily process, such as rate of breathing or pulsation of a volitional muscular or intellectual process, when the subject's attention is engaged by some mental content.

Measure at the same time concentration or distraction of attention.

RIGHT AND LEFT MOVEMENTS.

The accuracy with which movements are made to the right and left. Some such test as this for indication of right and left handedness.

RAPIDITY OF MOVEMENT.

Taps on a telegraph key. Movements requiring force, as described above. Make short marks as rapidly as possible for twenty or thirty seconds, e. g., | | | | |. Trilling with two fingers and with five.

ACCURACY OF AIM.

Throwing a marble at a target. Or striking a point upon the table with a pencil point. Touch an insulated spot. Also for steadiness of hand.

REACTION TIME FOR SOUND.

The reaction to be made with the right hand with a signal about two seconds before the stimulus. Five reactions to be made without preliminary practice; after the reactions have been made, the observer to be asked whether the direction of the attention was motor or sensory. It is not much use to ask for direction of attention with most subjects. Sensory and motor reaction with instruction after the above test.

Reaction-time with choice—Use card sorting.

RATE OF DISCRIMINATION AND MOVEMENT.

One hundred a's in 500 letters to be marked, or as many as can be marked in one minute. One out of a number of geometrical forms to be marked; determine the number marked in ninety seconds; or colors or pictures of objects.

QUICKNESS OF DISTINCTION AND MOVEMENT.

Rate at which cards are sorted. Combine with reaction with choice. With the effects of practice, etc.

PERCEPTION OF SIZE.

Draw a line equal to a model line 5 centimeters in length, bisect it, erect a perpendicular of the same length and bisect the right-hand angle.

PERCEPTION OF TIME.

The accuracy with which a standard interval of time, say ten or twenty seconds, can be reproduced; thirty seconds or one minute.

MEMORY.

The accuracy with which eight numerals heard once can be reproduced and the accuracy with which a line drawn by the observer at the beginning of the hour can be reproduced at the end of the hour. Line to be identified (not drawn). Ten numerals to be used. Nine numerals. A combined test of memory, association, and finding time as described in the catalogue of the Columbian Exposition.

MEMORY TYPE.

Variations in use of 10 numerals; method as follows: (1) Show numerals in chance order and have subject write them from memory after a small interval; (2) speak numerals in chance order and have subject write them from memory after the interval; (3) show and speak in chance order and have subject write them from memory after the interval; (4) show and have the subject speak them and then write them from memory after the interval. Compare the results for indications of memory type and kind of imagery preferred. Question the subject as to his mental material in each case.

IMAGERY.

Questions proposed in the Columbia tests. Methods should be worked out more fully. Cf. method under preceding head. Make memory span tests, showing and speaking the digits at the same time, and ask the subject which sense (sight or hearing) he found himself using, and if either seemed to him a distraction.

LITERATURE.

Gastrow, Joseph. Section of Psychology, Official Catalogue of Exhibits, Dpt. M. World's Columbian Exposition, 1893.

Cattell, J. McKeen and Farrand, L. Physical and mental measurements of the students of Columbia University. Psychological Rev., Nov., 1896. New York.

Cattell, J. McKeen. Mental tests and measurements, with appendix by Francis Galtin. Mind 1890. London.

Münsterberg, Hugo. Zur individual psychologie. Centralblatt für Nervenheilk. und Psychiat. 1891.

Gilbert, J. A. Studies from Yale Laboratory, 1895. Reported also by E. W. Scripture, Zeitschr. f. Psychol., x, 1896, and in Psychological Rev. III, 1896.

Kraeplin, Emil. Psychologische Arbeiten, 1895.

Binet, A. et Henri, V. La psychologie individuelle. L'année psychologique, 1896.

2. SCHEDULE USED BY AUTHOR.

Name; date; school grade; name of observer; sex; date of birth; age in years and months; place of birth; color of hair, of eyes, of skin; first born; second born; later born.

ANTHROPOMETRICAL.

Weight; lung capacity; height; sitting height; strength of lift, of arms, of right-hand grasp, of left-hand grasp; total strength; is the subject left-handed; maximum length of head; maximum width of head; cephalic index; distance between zygomatic arches, between external edges of orbits, between corners of eyes; length of nose; width of nose; height of nose; nasal index; length of ears, right, left; length of hands, right, left; width of mouth; thickness of lips.

PSYCHO-PHYSIOLOGICAL.

Least sensibility to locality, right wrist, left wrist; least sensibility to heat, right wrist, left wrist; least sensibility to contact on the skin; least sensibility to pain by pressure of two points; least sensibility to pain by presure, right

temporal muscle, left temporal muscle; least sensibility to smell, right nostril, left nostril; least sensibility of muscle sense to weight, right hand, left hand; pulse; respiration.

SOCIOLOGICAL.

Nationality of father; nationality of mother; nationality of grandfather, father's side, mother's side; nationality of grandmother, father's side, mother's side; occupation; education.

ABILITY IN STUDIES.

Bright, dull, or average, in general; in arithmetic; algebra; grammar; drawing; geography; history; music; reading; spelling; penmanship; German; French; Latin; Greek; geometry; physics; science; manual labor; etc. (Answer after each study and for other studies not mentioned. When in doubt as to brightness or dullness, mark person average.)

ABNORMAL OR PATHOLOGICAL.

If abnormal or peculiar, name in what way; unruly; sickly; defects in speech; defects in sight; defects in hearing; palate; aural asymmetry; cephalic; palpebral fissures; frontals; expression; hand balance; nutrition; pigmentation; ptosis; rachitism; epilepsy; lordosis; kyphosis; scoliosis; other defects, and stigmata of degeneration.

3. REFORM SCHOOLS.

In what different places have you lived, and how long? Has either parent died, and if so, which one, and when? Did your father get drunk? Did your mother drink liquors? Did your father have steady work? Did your mother have steady work? Did your father and mother quarrel with each other? Were your father and mother separated; if so, when? Were they divorced; if so, when? Which one did you live with? How many brothers have you? Sisters? At what age did you begin to go to school? How long did you attend school? At what age did you leave school? What grade were you in when you left school? Read? Write? Why did you leave school? What did you do after you left school? At what places and how long did you work for wages? How old were you when you went to work? What kind of work did you do? What wages did you get? Did you ever go on a bum? Where and with whom? Were you ever committed to jail before? How many times? Did you ever drink liquor; if so, at what age did you begin? Did you attend any church or Sunday school; for how long a time? Why did you cease to attend? What trade would you like to follow?

PHYSICAL CONDITION.

Health of subject. Vision defective; to what extent? Hearing defective; to what extent? Other physical defects. Hereditary disease in family? Mentality of subject?

QUESTIONS AS TO NEWCOMER.

Is he disobedient, vicious, selfish, untruthful, a thief, an assaulter, mischievous, vagrant, unclean minded, stubborn, a runaway?

QUESTIONS AS TO PAROLING BOY.

Is he honest, truthful, polite, obedient, faithful, prompt, good-natured, good worker, competent, of good judgment; has he made good progress in school? what is his present grade; how many times promoted; does he read much; what does he like to read; how much manual training has he had; has he any personal habits, traits, or peculiarities which will make him an undesirable member of a family?

4. PRISONS.

Family antecedents.—Paternal and maternal: Grandfathers, grandmothers, uncles, aunts, cousins. The father: Age, profession, health at generation, al-

coholism, rachitism, syphilis, criminality, conduct. The mother: Age, profession, health at generation, alcoholism, rachitism, syphilis, criminality, conduct, details as to birth.

Personal antecedents.—Physical: Constitution, health. Nursed: At the breast, artificially by mother, by nurse, date of weaning; date of walking. Diseases of childhood: Dentition, eruptive fevers, incontinence of urine, convulsions. Puberty: First sexual manifestation, onanism, menstrual period (date and hygienic conditions) in the family, school, working place. Accidents: Wounds on the head, etc. Psychical: Intelligence; instruction acquired, schools attended, power of imitation, imagination, attention, memory, language, slang, professional ability, particular tastes, reading of novels, etc. Special inclinations: To design, music, etc., appreciation of teachers, of comrades, of neighbors. Sentiment: Tendency to drink, to gamble, to steal, to abnormal sexuality, to destructiveness, to construction or ingenuity; anger, vengeance, jealousy, lying, moral sense, kindness, cruelty, laziness, foresight, pride, vanity. Affection: for parents, for teachers, for comrades; remorse, religious disposition. Character: Regularity, excitability, impulsiveness, prudence, hesitation, automatism, suggestibility, firmness, force of will, tenacity, astuteness, cynicism, physiognomy, attitude, care of clothes, walk, muscular ability, force, agility, etc. Efficacy of punishment or recompense, eccentricities. Anthropometrical examinations, anatomical: Height, sitting height, direction of vertebral column, circumference of thorax, armreach, weight, muscular system; movements of fingers, onycophagy (biting of finger nails), nutrition, strength of hand grasp, reflexes. Skin: Color, diseases of, vasomotor reaction, cutaneous reflexes, scars, tattooing; conditions under which it was done. Pillosity: Hair, color, quantity, hairs, finger nails. Cranium: Volume, large, small, unequal, voluminous in front, voluminous in back; form—long head (dolichocephaly), short head (brachycephaly), sugar loaf (acrocephaly), flattened vault (platycephaly), pointed in front (oxycephaly), frontal bones effaced, pointed in back (ipsycephaly), boat-shaped head (scaphocephaly), depressed at bregma (cymbrocephaly), very round (trococephaly), symmetrical head; asymmetry—oval-oblique (plagiocephaly). Measurements of head: Length, width, cephalic index. Face: Asymmetry, upper part—forehead, eyebrows, eyes, eyelids, pupils, strabisism, color of iris. Cheek bones: Middle face, nose, nostrils, base prognathism, lips, teeth; palate. Lower part of face, jaws, dimensions, form, symmetry, acromegy, ears. Measurements of face: Length, width (between the zyomatic arches), diameter of forehead, facial angle, external ear. Physiological: Respiration, circulation, digestion. Nervous system. Genital organs: Breasts (where painful); secretions; sleep, dreams; sight, acuteness, distinction of colors; hearing; smell; taste; use of tobacco. Sensibility: General, of the skin; tactile, to pain, cold, or heat; meteorological influences. Tremblings; tics; spasms; contractions; paralysis; troubles of speech; handwriting.

5. Schools for the Blind.

NOTE TO PARENTS OR GUARDIANS.

The primary object of the school shall be to furnish the blind children of the State the best known facilities for acquiring a thorough education and to train them in some useful profession or manual art by means of which they may be enabled to contribute to their own support after leaving the school.

All blind persons residing in the State, who are not under 5 or above 21 years of age and who are not incapacitated by physical, mental, or moral infirmity for useful instruction shall be considered eligible for admission as pupils of the school, but no one whose age does not come within the limits prescribed shall be received, except in peculiar cases and by special action of the executive committee.

From the above it will be seen that the school is purely educational in its aims and objects. It is not an asylum, not an infirmary, not a nursery, not a home for adult blind or aged people, or an almshouse for the indigent or indolent, but strictly a school for the education of children who are blind, or whose eyesight is so defective as to make it impossible for them to attend ordinary schools.

Above all, this is not a hospital. If the child simply needs treatment this is not the place for him. He should be sent to some hospital, or put under the care of some specialist. The child must be strong and well in all particulars, except eyesight, in order to be admitted here. Observation of these regulations will save you trouble and expense.

All suitable applicants will be admitted and every effort made to instruct and train them, but should any prove either mentally deficient, physically incapable or disobedient in conduct, their parents or guardians will be notified at once to remove them from the school.

QUESTIONS.

Was applicant born blind? If not born blind, at what age did blindness occur? Has any effort been made to cure blindness? If so, with what result? When it was noticed that the applicant's eyes were not all right, what home remedies were used, and how soon was a physician called? At what age did the applicant first walk alone? Can applicant (*a*) feed, (*b*) wash, and (*c*) dress himself? Has the applicant any peculiarities of disposition? Is he of a kind and docile temperament? What is the applicant's moral character? Is the applicant addicted to profanity, vulgarity, or other indecent speech? Does the applicant now use, or has he ever used tobacco? If so, to what extent? Is the applicant now addicted, or has he ever been, to the use of liquor? Has the applicant ever been a pupil of a school for the seeing? If so, when and for how long? Has he ever been a pupil of any other school for the blind? If so, when and for how long? Please state in full how the applicant has employed his time at home; i. e., how much in play or in work, how much in sitting idly? Has he ever learned to perform any manual labor or even been usefully employed? If so, at what? For what purpose does he wish to enter this school? Why has the application for admission to a school for the blind been delayed until now? Do you wish to send him as a student in the school, or merely for eye treatment? What is or was the general bodily condition of the father? Is or was he vigorous and healthy, or the contrary? Are or were all of his senses perfect (sight, hearing, taste, smell, and touch)? Is or was he always a temperate man? About how old was he when the applicant was born? If dead, at what age did he die, and of what disorder? Is or was there any known peculiarity in the family of the father of the applicant, i. e., were any of the grandparents, parents, uncles, aunts, brothers, sisters, or cousins, blind, deaf, or insane, or afflicted with any infirmity in body or mind? Is the mother living? What was her maiden name? What is or was the general bodily condition of the mother of the applicant—strong and healthy or the contrary? Is or was she ever subject to fits; scrofula? Are or were all of her senses perfect (sight, hearing, taste, smell, and touch)? Is or was she always a temperate woman? About how old was she when the applicant was born? Was she subject to any extraordinary influence before the birth of the applicant? How many children had she before the applicant was born? Was she related by blood to her husband? If so, in what degree—first, second, or third cousin? If dead, at what age did she die, and of what disorder? Is there any known peculiarity in the mother's family; i. e., were any of her grandparents, parents, uncles, aunts, brothers, sisters, or cousins, blind, deaf, or insane, or afflicted with any infirmity of body or mind? Which parent does the applicant most resemble? Has any serious disease appeared more than once in the family of the applicant's father? If so, specify what disease and how many times it has appeared. (The chief diseases meant are insanity, idiocy, intemperance, consumption, and cancer.) Has any serious disease appeared more than once in the family of the applicant's mother? If so, specify what disease and how many times it has appeared. (The chief diseases meant are insanity, idiocy, intemperance, consumption, and cancer.) Are there any other cases of blindness in the family? If so, how related to the applicant? What is the supposed cause of blindness? How many living brothers and sisters has the applicant? If any have died, please state at what ages and of what disorder. Has the applicant ever sustained accident?

The following questions must be answered by a competent physician:

Has the applicant ever been subject to fits, or had any kind of brain disease or serious illness? Name what he has had. Is the child subject to (*a*) epilepsy; (*b*) chorea; (*c*) tonsilitis? Has he ever shown any signs of mental weakness or deficiency? Has the applicant any physical deformity? If so, what? Is the applicant now in good health and free from eruptions and contagious diseases of the skin? Has the applicant the full use of his hands and fingers? Has the applicant any infirmity or disease other than blindness? If so, what? Does the applicant breathe through his mouth or snore at night? Has the applicant had (*a*) scarlet fever; (*b*) measles; (*c*) mumps; (*d*) whooping cough; (*e*) chickenpox; (*f*) rheumatism; (*g*) bronchitis; (*h*) diphtheria; (*i*) pneumonia; (*j*) spinal meningitis; (*k*) smallpox? Has applicant been successfully vaccinated? If so, when?

The following questions are to be answered by an oculist. If an oculist is not accessible they must be answered by a physician:

What is the cause of blindness? Is the blindness total or partial? With the left eye carefully covered, (*a*) can the applicant discern light with the right eye; (*b*) at what distance can he count fingers; (*c*) at what distance can he read large print; (*d*) at what distance can he read ordinary print; (*e*) when visual acuity is greater than fingers at ten feet, use as record Snellen test types.

With the right eye carefully covered, (*a*) can the applicant discern light with the left eye; (*b*) at what distance can he count fingers; (*c*) at what distance can he read large print; (*d*) at what distance can he read ordinary print; (*e*) when visual acuity is greater than fingers at ten feet, use as record Snellen test types. If vision is improved by glasses, have correct lenses been prescribed by an oculist?

6. The Deaf.

QUESTIONS.

Does the child live with its parents? If not with parents, with whom? If not with parents, how supported? Of what nationality and color? What is the natural mental condition of the child? Bright and quick, or dull and sluggish? Will the child obey a command? Can the child do an errand? Can the child distinguish forms and colors, one from another? Has the child any idea of number? Is the child's attention easily got and held? Is the child's power of imitation strong or weak? Has the child a retentive memory? Has the child any constructive ability? Does the child play with its brothers and sisters, and others, who hear and speak? Can the child care for itself in a general way—dress and undress itself, care for itself at table, satisfy calls of nature without assistance, go up and down flights of steps by itself, etc.? What efforts have been made to instruct the child at home? Has the child been under instruction at any time other than at home—in public school or institution? If so, where, when, and how long? Can the child print or write? Which? Can the child read? Does the child understand written language? Does the child draw or sketch, or attempt to? Can the child count, and how far? Has the child learned to perform any kind of labor or to usefully employ itself? If so, in what way? What has been the general moral conduct and disposition of the child? Was child born deaf? Answer, "yes," "no," or "doubtful." If doubtful, give some reason for being so. If born deaf, can you suggest any cause for it? How old was child when you discovered deafness? (Answer both questions.) If not born deaf, state cause of deafness, naming sickness or accident and age it occurred. Is the deafness total or partial? Is the deafness becoming greater or less at this time? Is the child too deaf to be educated in the public schools at home? If there is partial hearing, is it feeble or considerable? Is it better in right ear, in left ear, or equal in both ears? What is the character of sounds heard by the child? "Human voice" or "other sounds?" Is the child's ability to distinguish kinds of sounds heard by it feeble or considerable? To what extent can the sound of another's voice be heard by the child? And at what distance? Name some of the "other sounds" heard by the child. Could the child talk more or less distinctly before deafness occurred? Can the child speak any words more or less distinctly now? If child possesses speech, is it slight or considerable? Is it growing better or worse at this time? Give a number of the words spoken by the child? Are these words fairly well pronounced and intelligible to others? Does child understand spoken language from the motion of lips of another to useful degree? Answer "no," slightly," or "yes." How does child communicate with others? By speech, by writing, or by signs? Describe. Is such communication intelligible to parents and others? Is the child of usual size and weight for present age? Was the child born at full term? Was the labor difficult or ordinary? Were instruments used at delivery? Was there lack of animation in child at birth? Had the child a convulsion soon after birth? Was the child a strong or a weakly babe? Has the child perfect use of legs, arms, hands, and feet? Answer "yes" or "no." Describe any imperfection fully. Is there any irregularity in walking? Or any difficulty in going up or down stairs without assistance? Is there any paralysis, deformity, malformation, or physical weakness? Answer "yes" or "no." Is there any derangement of nervous system? Has the child chorea, palsy, epilepsy, or fits? Is there heart trouble or irregularity of any kind? Is there scrofulous ulceration or glandular swelling? Is the child of scrofulous nature? Is there cold in the head or catarrhal trouble? Is the child subject

anchylosed pelvis, funnel-shaped pelvis, elongation of the coccyx, absence of the symphysis.

Generative organs.—Female? Hermaphrodism, enlarged clitoris, atrophy or infantile condition of uterus, atrophy or infantile condition of ovaries, atrophy or infantile condition of vagina, atresia of the vagina, partial or total reduplication of the vaginal and uterine canals (quite common in the degenerate). Male: Epispadias, hypospadias, phimosis, cryptorchism, atrophy of the penis, large penis (length, circumference), small penis (length, circumference), atrophy of one or both testes, incomplete descent of one or both testes, retarded or late development of male organs, azoospermia, aspermia.

The skin and appendages.—Skin: Sallow or pallid, leathery, prematurely wrinkled, branchial clefts, preaural sinuses, nævi or pigmented areas, tattoo marks. Hair: Beard scanty, dense growth of coarse hair on other parts of body, congenital spots of baldness, patches of gray hair appearing in early life, absence of eyebrows or pubic hair, prolongation of eyebrows meeting at median line, scalp covered with coarse hair, hairy moles on body, tufts of hair on back and abdomen (Lanceraux says absence of hair on chest of adult males is sign of physical degeneracy, indicative generally of tuberculosis). Nails: Thin and friable finger nails, pigmented nails, heavy thickened arched nails, nails with heavy flat furrows extending the whole length, giving a decided roughened appearance, the neurotic nail, the heavily ridged nail (generally transversely). Lack: General nutrition of the body deficient, poorly nourished, pale, anæmic, loss of strength.

The eye.—Normal, oblique Mongolian, megalophthalmus, microphthalmus, macrophthalmus, expression, color. Lids: Microblepharon, symblepharon, coloboma palpebræ, epicanthus, congenital ptosis. Cornea: Dermoid adhesions on the cornea, especially small tufts of hair. Iris: Coloboma iridis (partial or complete), aniridia, polycoria, membrana pupillaris (perseverans), corectopia, asymmetrical coloration of iris in whole or in part, oval or eccentric pupil. Interior of the orbit: Coloboma choroidæa (congenital), coloboma lentis (congenital), staphyloma posticum (scarpal), arteria hyaloidea persistens, persistent nerve fibers of retina, retinitis pigmentosa. Muscular defects: Nystagmus (congenital), strabismus (congenital). Physiological variations: Hemeralopia, daltonism, abnormalities, of the visual field.

Thorax.—Funnel breast (thorax en entonnior), pectus carinatum, or pigeon breast, gynæcomastia or development of breasts in male, supernumerary breasts (female), absence of breasts (female), atrophy of breasts (female), small breasts.

Tongue.—Large, small, fissured, red, square, pointed, enlarged papillae.

Thyroid gland.—Normal, excessive, arrested.

The extremities.—Left-handedness, ambidextrous, superior strength and development of left hand and leg, abnormally long fingers, congenital clubfoot, defective extension of the end of phalanges of little fingers, congenital luxations, clubbed fingers, webbed fingers (syndactylus), polydactyl. Arms: Asymmetrical, long, short. Hands: Asymmetrical, long, short. Legs: Long, short. Feet: Large, small, long, short, flat, instep (low, high). Aplasia of extremities, hypoplasia of extremities, amelus (limbs entirely wanting or replaced by wart-like stumps), peromelus (all four extremities stunted), phocomelus (limbs consisting of merely hands and feet sessile upon the shoulders and pelvis), micromelus (limbs regular in form but abnormally small), abrachius and apus (absence of upper limbs while the lower are well formed and vice versa), perobrachius and peropus (arms and thighs normal; forearm and hands, legs, and feet malformed), monobrachius and monopus (absence of a single upper or lower limb), sympus apus and sympus opus (absence of feet, or maybe represented by single toes, or by one foot, as in siren monsters), achirus and perochirus (absence or stunted growth of the entire hand or foot—Zeigler).

ETIOLOGICAL HISTORY.

[This blank should be filled out by a physician.]

Was the child born at full term? Was the labor ordinary or difficult? Were instruments used? Was the child injured in any way during delivery? Was there deficient animation in the child at birth? Was the child paralyzed in any way immediately after birth? What was the child's weight at birth? Had the child a convulsion soon after birth? State the order of this child's birth—

whether first born or second born, etc. Was the child nourished by its mother or fed artificially? State any peculiarities in the early nutrition of this child. Was a sickly or strong babe? If the former, how manifested? Was it subject to "indigestion," "pain in stomach," or prolonged "fits of crying?" Do you consider the cause of h condition to have been congenital, or is it the result of an accident or acute sickness? In either case, please specify. Was either parent subjected to any special overtax of mind or body immediately prior to the conception of this child? Was the mother during pregnancy subjected to any continuous anxiety or hardship, or exposed to any shock, accident, or specially painful emotion? If so, particularize, and the period of gestation when such disturbance occurred. How many brothers or half brothers of are now living? How many sisters or half sisters are now living? Are they of sound health in body and mind? Are there any peculiarities of constitution among them? Are there deceased children? If so, please state the order of their birth, their sex, age, and the cause of their death, and whether their mental and physical powers were normal or not. Have the parents had any dwarfed or malformed children? Have all their children had complete coordination of all their movements? What were the ages of parents when was born? Father, ; mother. Was either parent addicted to the use of alcoholic drinks, tobacco, or opium prior to this child's birth? Were the grandparents on either side excessively given to either of the above-named habits? Had the general health of the parents been good previous to this birth, or had either of them been subject to paralysis, neuralgia, epilepsy, hysteria, chorea, eccentricity, nervousness, or constitutional taint? Were either of the grandparents afflicted with any of the diseases mentioned in question 26? Are both parents now living? If either is dead, of what disease, and at what age? If grandparents are deceased, of what disease, and at what age: Paternal grandfather, paternal grandmother, maternal grandfather, maternal grandmother. Were the parents of this child related before marriage? If so, in what degree? Were the grandparents on either side related before marriage? If so, in what degree? Are there any instances of insanity or feeble-mindedness in the families of the father and mother, of their brothers and sisters, or in the ancestry of either side? Is there any tendency to blindness or deafness in the families on either side? Are there any instances of, or tendencies to, "scrofula," consumption, goitre, rheumatism, syphilis, or blood poison in the families on either side? Are there any instances of paralysis, epilepsy, hysteria, chorea, neuralgia, or sick headache, or any convulsive disorders in the families on either side? State on this and the next page any other facts which, in your judgment, may seem to have a bearing in this particular case, on the important subject of causation.

EPILEPTIC HISTORY.

Did he have a spasm or convulsion soon after birth? When did he have the first convulsion? Was he unconscious? How long did it last? Was a physician called, and what did he say of it? What was supposed to be the cause of this attack? When did he have the second attack, and did it resemble the first? What has been the frequency of the attacks during the past year or two? Has there been any change in the character of the attacks since they began? Describe the last attack? Does he feel any "warning" before an attack? If so, describe it. Describe fully the character of the attacks, whether mild or severe, or both? State whether the entire body is affected, or only a portion. If only a portion, what portion? Is the patient unconscious during the attack, or can he remember what took place during it? Describe fully h actions after an attack, and how long it is before he is able to resume work. Is he especially difficult to control just before an attack or just after one? Does he attempt to do violence to h self or others during attacks? Was he ever severely injured or burned during an attack? What has been the effect of the spasms on h mind? Has he "false sight" or "false hearing?" If so, describe fully. Has h memory been affected by the spasms? Has there been any change in h disposition? Has paralysis at any time followed the spasms? If so, when and what portion of the body was paralyzed? Was he suffering from any other diseases than epilepsy at the time the paralysis was noticed? Is he still paralyzed, or has he improved? Has he ever temporarily lost the power of speech after an attack? Do the convulsions occur in the day or night, or both? Has he ever had a large number of attacks following each other in rapid succession? Were all these

attacks alike in character, and what is the greatest number he has had in one day? Do these attacks occur often? In your opinion is he getting better or worse? What treatment has been used, and what were the results? State anything further of interest concerning these attacks, their cause, and history.

8. INEBRIACY.

Nutrition and hygienic surroundings up to puberty. Diseases and injuries up to puberty. Nutrition, diseases, injuries up to 30 years of age. What diseases are constitutional in the family? Were any relatives inebriates or moderate drinkers? When did patient begin to use spirits? When first intoxicated? Is he periodical, constant, or irregular inebriate? If periodical, length of paroxysm, free interval, and general symptom. General condition when intoxicated. Is the inebriety a sudden or gradual growth? What are supposed to be the exciting causes? What is the present condition? What physical conditions are prominent? Pulse and heart. Kidneys. Digestion. Liver, arterial tension. Venereal disease. Complications. Delirium tremens and convulsions. Sequela. What conditions of living, both mental and physical, have influenced inebriety? Treatment in other asylums; when and where? With what results? Characteristics of the case. Heredity and traumatism are the most prominent factors.

SIGNS OF DRUNKENNESS.

First stage (first five or ten minutes).—Face: Pale face; facial muscles drawn and fixed in position. Eyes: Bright and glittering; movements quick and constrained. Mouth: Firmly shut; lips spasmodically affected when speaking. Other signs: Breath short and panting; pulse increased; speaking interrupted and difficult; trembling movement of entire body and sensation of shivering.

Second stage (after five to ten minutes of first stage).—Movements: Unnatural, very quickly distorted, and staggering. Intellectual activity: Irregular and unsteady; voice elevated and incessant talking, with absurd boasting. The nervous system: Loses power and is unduly sensitive; radiates further and endures longer than in health. Blood: (1) Impoverishment, retarded in circulation; (2) irritative effects; (3) degenerative effects on the nervous centers; vasomotor paralysis and impaired reflex action. Tissue changes: Fatty fibroid, and atrophic. Lungs: Alcoholic phthisis, chronic interstitial pneumonia. Liver: Cirrhosed, gin, or hobnail liver. Kidney: Cirrhotic, hard, or contracted. Stomach: Permanent congestion of blood vessels, exaggerated or vitiated secretions from the gastric glands; ultimately degeneration of submucous tissues; hypertrophic exaggeration of fibrous tissues. Nervous system: Waste of nervous matter; effusion of serous fluid into the ventricles and arachnoid, with marked development of fibrous tissue, granular fat, etc., giving rise to vasomotor paralysis; local stasis; alcoholic neuritis, anæsthesia, etc.; amblyopia. Innutrition: By lowering the vitality of the brain cells. Most significant post-mortem appearances: Excessive growth of connective tissue of the brain, neuralgian hypertrophy; nerve cells crushed, distorted, and atrophied.

XXIV. RECENT LITERATURE ON CHILD CRIME, SUICIDE, AND STIGMATA OF DEGENERATION.[a]

D'Abundo, G. Ossevazioni nei minori corrigendi. ann. di nevrol, Torino, 1892. n. s. X, 279–290.

Adams, M. E. Railroads and juvenile crime. Charities, XV, 203–6. 1905.

———. Causes of juvenile crime. Outlook, LXXXIII, 796–801, 1906.

Adshead, J. On juvenile criminals, reformatories, and the means of rendering the perishing and dangerous classes serviceable to the State. 8°. Manchester, 1856. Reprint from: Transactions of Manchester Statistical Society.

Albanel, Lous. Le crime dans la famille, 1900.

Albanel et Legras. L'enfance criminelle à Paris. Revue philanthropique, 1899.

Albanel, Louis. Étude statistique sur les enfants traduits en justice. 8°, 67, Paris, 1897.

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[a] Extensive bibliographies will be found in "Man and Abnormal Man" (pages 556 to 776), Senate Document No. 187, Fifty-eighth Congress, third session.

Alexander, Harriet C. B. Medical folklore of childhood. Pediatrics, N. Y., 1904, XVI, 265–271.
Altschul, T. Morbiditätsstatistik in Schulen. Arch. für f. Rassen u. Gesellsch. Biol., Berlin, 1904, I, 702–717.
Ammon. Infantilisme et féminisme aux conseils de révision. L'Anthropologie, VII, 1896, p. 285.
Amschl, A. Ein jugendlicher Räuber. Arch. f. Krim.–Anthrop, u. Kriminalist. Leipzig, 1903–4, XIV; 137–148.
Anarchism. Independent, LXIV, 538, 760–761, April 2, 1908.
Anderson, R. How to put down hooliganism. Nineteenth Century, LII, 13, 1902.
Anderson, W. S. The study of crime and degeneration from a medical standpoint. Pacific Rec. M. & S. San Francisco, 1896–7, XI, 145–148.
Angiolella, Gaetano. Sulla genese biologica del delitto manicomio. Nocera, 1905, XXI, 219–247.
Angiolella, Gaetano. Manuale di antropologia criminale ad uso dei medici e degli studenti di medicina e jurisprudenza. Milano, 1906. 400 p. 12°.
Antonini e Carini. Di un caso di microcephalia vera. Gazz. med. di Torino, n. 31–32, 1901, III.
Antonini, Giuseppe. I principi fondamentali della antropologia criminale. Milano, 1906. 175 p. 12°.
Apert, E. Quelques remarques sur l'arhondroplasie, etc. 1902, p. 240–299.
Aschaffenburg, G. Das Verbrechen und seine Bekämpfung. Heidelberg, 1906. 297 p. 8°.
Aschrott. Die Behandlung der verwahrlosten und verbrecherischen jugend und Vorschläge zu Reform. Berlin, 1892.
Aubry, P. Uune famille de criminels. Note pour servir à l'histoire de l'hérédité. Ann. Méd. Psych., Paris, 1892, 7. s, XVI, 429–441.
Bacque. Les stigmates psychiques et physiques de la dégénérescence mentale héréditaire. Th. de Paris, 1889.
Bady, G. Jaws of degenerates. Amer. Jour. of Insanity. 1896.
Baer, A. Ueber jugendliche Mörder und Todschläger; kriminalanthropologische Beobachtungen. Arch. f. Krim.-Anthrop. u. Kriminalist., Leipzig, 1902–3, XI, 103–170.
Baernreither, J. M. Jugendfürsorge und Strafrecht in den Vereinigten Staaten von Amerika. Leipzig, 1905. p. 303.
de Baetz. L'éducation des fils de criminels. Congrès de Gènève, 1896, p. 90.
Ballet. Hemihypertrophie congénitale du côté du corps. Soc. de neurol. de Paris, Rev. neurol., 1902, p. 631.
Bargain, Léopold A. L. Contribution a l'étude du suicide chez les persécutés. Paris, 1905. 72 p. 8°.
Barr, M. W. Influence of heredity on idiocy. Jour. of Neurol and Mental Disease, 1895.
Barrett, R. M. Treatment of Juvenile offenders. J. Statis. Soc., LXIII, 183.
Barrows, S. J. Juvenile courts in the United States. Independent, LVIII, 238–240, 1905.
——— Children's courts in the United States. Archiv für Krim.-Anthrop und Kriminalist., Leipzig, 1906–7, XXVI, 81–92.
Bates. R. C. Character building at Elmira. Amer. J. Soc., III, 577–600, 1898.
Battistelli, L. Il sistema pilifero nei degenerati. Arch. di psichiatria, 1900, p. 1 et 23.
Beck, Gust. Gedanken eines Arztes über Sträflings-Diagnostik und Sträflings-Therapie. Bern (105), O. Franke, 23 p. 12°.
Beiträge zur Lehre von Degenerationzeichen. Deutsche zahnärztl. Wochnschr., Berlin, 1906, IX, 97, 110, 125, 141.
Belougon (L.) Le pouvoir de l'imagination chez les enfants. Mercure de France, Paris, 1904, LII, 136–149.
Bender. Das " Morel' " sche Ohr. Arch. für Psych. und Nervkr., 1889, Bd. XX, H. 2, p. 514.
Benjamin, Just-Ernest-Edouard. La colonisation pénale à la Guyane française. Bordeaux, 1906. 58 p. 8°.
Bennett (E. C.) Juvenile court of Denver. Sunset, XVI, 458–464.
Berardi, Vito Antonio. I neurastenica e la risponsabilità penale. S. Maria Capua Vetere, 1906. 226 p. 8°.
Bérillon. Les enfants indisciplinés, etc. Rev. de l'hypnotisme et psycho. physiol., Paris, 1907–8, XXII, 173–177.
Bérillon. Les femmes à barbe. Rev. de l'Hypnotism. Paris, 1907.

Binet, A., & Simon T. Méthodes nouvelles pour le diagnostic du niveau intellectuel des anormaux. Année psychologique, Paris, 1905, XI, 191–244.
——— Les enfants anormaux. Paris, 1907. A. Colin. 222 p. 12°.
Blich, A. La forme des doigts et les nodosités de Bauchard. Assoc. franc pour l'avancement des sciences, 1889.
Biondel, Charles. Les auto-mutilateurs. Étude psychopathologique et médico-légale. Paris, 1906. 136 p. 8°.
von Boehn, Max. Selbstmord und Selbstmörder. Charlottenburg, 1907. 64 p. 8°.
Bomb-thrower. Nation, LXXXVI, 300, April 2, 1908.
Bonjean, G. Enfants révoltés et parents coupables. Paris, 1895.
Bouger, W A. Criminalité et conditions économiques. Amsterdam, 1905. 792 p. 8°.
Bouzon, J. Le crime et l'école, 1896.
Bourneville. Exemples de malformations des membres chez les dégénérés. XI. Congrés des médercins aliénistes et neurologists, Limoges, 1901.
Brandt, Les femmes à barbe. Rev. scientifique, 1897, 4. série, t. VII.
Breisler, Joh. Greisenalter und Criminalität. Halle, 1907.
Brown, James E. Increase of crime in the United States. Independent, April 11, 1907.
Brugia, R. I problemi della degenerazione. Bologna, 1906. 457 p., 12 pl. 8°.
Brunet, H. Dégénérescence mentale. Paris, 1893.
Bulletin de la Société des enfants martyrs, 1894. pp. 27, 183.
Burkhardt, J. Das jugendliche Verbrecherthum und seine Bekämpfung. Blätter f. Gefängnisskunde. Cassel, 1902, XXXVI, 76–123.
Büttner, G. Die Schwachbegabten an höheren Schulen. Kinder-Arzt, 1907, XVIII, 265–272.
Calon, Eugene C. La Mafia. Notas sobre la criminalidad en Sicilia. Madrid, 1905, 165 p. 8°.
Camuset. De l'absence du chevauchement habituel de la partie antérieure des arcades dentaires comme stigmate de dégénérescence. Annales med. psycholog., 1894, p. 36.
Cantile, J. Physical efficiency; a review of deleterious effects of town life, etc. New York, 1906.
Carrara, M. Les petits vagabonds de Cagliari. Rev. de l'hypnot., 1901, XVI, 135–139.
Casal, J. J. Aperçu sur les pénitenciers agricoles des jeunes détenus, et spécialement sur celui du Lile, du Levant ou du Titau au point de vue de l'hygiene physique et morale. 4°. Montpellier, 1873.
Casper, John L. Ueber den Selbstmord und seine Zunahme in unserer Zeit. Berlin, 1825.
——— Mémoires de statistiques médicales et de médecine publique 1825 et 1835.
——— Denkwürdigkeiten zur medizinischen Statistik. Berlin, 1846. S. 158.
Charpentier, René. Dégénérescence mentale et hystérie. Les empoisonneuses. Paris, 1906. 231 p. 8°.
Charra, E. * * * Recherches sur les anomalies de développement observées chez les enfants de parents alcooliques. Lyon, 1906, 96 p.
Child suicide in Germany. Med. Rec., N. Y., 1905, LXVIII, 661.
Children's court. Charities, XI, 395–397, 1903.
Children's purgatory. Fortn. Rev., LXXXV, 948–959; same in Liv. Age, CCXLIX, 719–728, 1906.
Claasen, W. Die Frage der Entartung der Volkmassen auf Grund der verschiedenen, durch die Statistik dargebotenen Massstäbe der Vitalität. Arch. f. Rassen- u. Gesellsch.-Biol., Berlin, 1906, III, 540–553.
Clark, A. W. State control and supervision of charities and correction. Nebraska University Studies. XV, 1905.
Collineau. Du suicide chez les enfants. Journal de médecine mentale. Tome VIII, Nr. 12, p. 418.
Conference on backward, truant, and deliquent children. Charities, XII, 657–661, 1904.
Corne, A. Étude sur l'éducation correctionnelle des jeunes détenus du département de la Seine. Paris, 1862.
Cornell, W. S. The relation of physical to mental defect in school children. Psychol. Clin., Phila., 1907–8, I, 231–234.
Cuche, P. Le patronage des libérés et le sauvetage de l'enfance en province. Rev. pénitentiaire, mai, 1902, p. 617.

Dallemagne, Jules. Les stigmates biologiques et sociologiques de la criminalité. 212 pp. 12°. Paris, 1896.
——— Les stigmates anatomiques de la criminalité. 185 pp. 12°. Paris, 1896.
Darin, G. Education correctionnelle. Système cellulaire appliqué aux enfants. Observations sur les jeunes détenus de la Roquette venus à Bicêtre en état de folie, d'idiotie ou d'épilepsie. 4°. Paris, 1863.
Darnal, A. Dégénérescence et responsabilité pénale. 4°. Paris, 1896.
Davenport, Gertrude. Hereditary crime. Amer. Jour. of Sociology, XIII, 402–409, 1907.
Davis, R. G. Slum environment and social causation. Westminster Rev., London, 1906, CLXVI, 248–257.
Delessert. Rapports à M. le Ministre de l'intérieur au sujet des modifications introduites dans le régime du pénitencier des jeunes détenus de la Seine. Paris, 1851.
Demoor et Daniel. Les enfants anormaux à Bruxelles. L'année psychologique, 1900, VII, Paris.
De Quiros, C. B. Vocabulario de antropologia criminal. Madrid, 1906. 149 p. 12°.
Destitute, neglected, and delinquent children. Charities, X, 129–142, 213–220; XI, 88–90.
Deutsch, E. Ueber Kinderselbstmorde. Arch. für Kinderh., Stuttgart, 1903–4, XXXVIII, 37–56.
Deutsch, Wm. Der Morphinismus. Stuttgart, 1901.
Diettrich, G. L'enfant criminel né; étudié sur un enfant de 10 ans en particulier. Centralbl. f. nervenh. u. Psychiat., Coblenz u. Leipzig, 1894, n. F., V, 579–584.
Dieudonné. Kinderselbstmorde. Arch. für Culturgeschichte, Bd. L, Hft. 3, 1903.
Dix, Arthur. Die Jugendlichen in der Sozial-und Kriminalpolitik. Jena, 1902, p. 90. 8°.
Dohrm v. Scheele, A. Beiträge zur Lehre von den Degenerationzeichen. Vrtljschr. f. gerichtl. Med., Berlin, 1906, XXXI, 1–26.
Doradro, Pedro. Las peritos médicos y la justicia criminal. Madrid, 1906. 295 p.
Drew, A. A. W. Hooliganism and juvenile crime. Nineteenth Century, XLVIII, 89–99, 1900.
Drillon, P. Les mineurs délinquents en province. Rev. pénitent., Paris, 1903, XXVII, 1083–1115; 1904, XXVIII, 72.
Dumas, A. Celebrated crimes of history. 1907.
Dupont, Franz. Les degrés de la volonté criminelle et l'état de récidive. Bruxelles et Paris, 1906. 168 p. 8°.
Durand, Fardel Max. Étude sur le suicide chez les enfants. Annales méd.-psycholog., 1855, p. 61.
Dussac. Considérations psychologiques et médico-pédagogiques sur un cas de dégénérescence. Thèse de Bordeaux, 1901.
Eberty und Lange. Erläuterungen zum Gesetz betr. die Unterbringung verwahrloster Kinder. Berlin, 1878.
Eltzbacher, Paul. Anarchism. New York, 1908.
Ertel. Ein zwölfjähriger Mörder. Arch. f. Krim.-Anthrop. u. Kriminalist., Leipzig, 1904, XV, 361–374.
Eschricht. Ueber die Richtung der Haare am menschlichen Körper. Müller. Arch. für Anatomie und Physik, 1837.
Falkner, R. P. Criminal statistics. Amer. Statis. Assoc., 1891.
Fallot et Robiolis. Un cas de criminalité remarquablement précoce. Arch. d'anthrop. crim., Lyon et Paris, 1896, XI, 375–378.
Farnarier. Acromégalie et dégénérescence mentale. Nouvelle iconographie de la Salpêtrière, 1899, p. 398.
Féré, Ch. Des rapports du tourbillon des cheveux avec l'obélion. Rev. d'anthropologie, 1881, p. 483.
——— et Schmid E. De quelques déformations du thorax, etc. Jour. de l'anat. et de la phys., 1893, p. 564.
——— Note sur les rapports du tronc à la taille. L'Anthropologie, 1893.
——— La famille névropathique, etc. Paris, 1894, p. 332.
——— Les épilepsies et les épileptiques. Paris, 1890.
Frank, Ludwig. Brandstiftungen. Bern, 1906. 86 p. 8°.
——— Dégénérescence et criminalité. Paris, 1895.

Ferri, Enrico. The positive school of criminology. Chicago, 1906. 125 p. 16°.
Ferriani, Lino.
——— Mères dénaturées. Bulletin de la Société des enfants martyrs, 1894. p. 27.
——— Minderjährige Verbrecher. Berlin, 1896.
——— Delinquenza precoce e senile. 460 p. Come o marine, 1901.
——— I drammi dei fanciulli. 1902.
——— Der Cynismus bei den jugendlichen Verbrechern. Monatschr. f. krim. Psychol. (etc.), Heidelberg, 1905, I, 171–176.
Filandeau. Études sur le noevi. Thèse de Paris, 1893.
Fischer, I. (The significance of moral blindness for psychiatry.). Gyógyaszat, Budapest, 1907, XLVII, 611–614.
Flesch. Zur Kasuistik anomaler Befunde an Gehirnen von Vebrechern und Selbstmördern. Archiv für Psychiat., XVI, Heft 3, 1885.
Föhring. Die Zwangserziehung und die Bestrafung jugendlicher Verbrecher. Handbuch des Gefängniswesens. Holtzendorff und Jagemann. Bd. II.
Folks, H. Care of destitute, neglected, and delinquent children. Munic. Affairs, VI, 2946, 1902.
Fouillée, A. Les jeunes criminels; l'école et la presse. Rev. d. deux mondes, Paris, 1879, CXXXIX, 417–449.
Fourcade, M. Le nombre des enfants arrêtés et les causes ordinaires de leur arrestation. Revue pénitentiaire, 1895.
Fournier, E. Les stigmates dystrophiques d'hérédosyphilis. Thèse de Paris, 1898.
Fox, H. F. Juvenile crime and the regulation of child labor. Ann. Amer. Acad., XXI, 332, 1903.
French child criminal. Review of Reviews, XXVII, 742–743, 1903.
French, L. H. Saving boys from crime. World's Work, II, 1214–1216, 1901.
——— Parole system for criminal boys. World's Work, II, 1214.
Galippe, V. L'hérédité des stigmates de dégénérescence et les familles souveraines. Paris, 1905. 72 p. 4°.
Garner, J. W. Crime and judicial inefficiency. Annals Amer. Acad. Polit. Science, May, 1907.
Garnier, P. La criminalité juvénile. Étiologie du meurtre. Arch. de l'anthropol. crim., 1901, XXII, 65–101.
——— La criminalité juvénile. Rev. scient., Paris, 1902, 334–338, 449–452.
Garnier, S., et Saintknoise, A. Note sur un cas d'hérédité régressive. Arch. de neurol., 1899, p. 129.
Gaupp, R. Ueber den Selbstmord. Arzt als Erzieher, München, 1905.
Geill, Chr. Kriminalantropologiske Studier over danske Forbrydere. Kjobenh., 1906. 358 p. 8°.
Geoffroy, Saint-Hilaire, I. Histoire générale et particulière des anomalies de l'organisation. 1832.
Gerhard, Paul. Die Mittel zur Vorbeugung der Empfängnis nebst einer Beleuchtung der durch die überaus grosse Kinderzahl herforgerufenen soziale Umstände. 4. Aufl. Berlin, 1906, W. Krüger. 26 p. 12°.
Gibbons, J., Cardinal. The moral aspects of suicide. Century Mag., N. Y., 1906–7, LXXXIII, 401–407.
Giuffrida-Ruggeri. Sulla dignità morfologica dei segni detti "degenerativi." Atti della Soc. rom. d' antropologia, 1896–7, Vol. IV, Fasc. II, III.
Goldmark, J. C. Street labor and juvenile delinquency. Pol. Sci. Qrt., XIX, 417–438, 1904.
Goncalves. J. Crime e degenerescencia. Med. Contemp., Lisboa, 1906, XXV, 340, 347, 411.
Gonser, J. Alkohol und Verbrechen. Berlin, 1907.
Gotteland. Contribution à l'etude de l'appareil de la vision chez les dégénérés. Thèse, Paris, 1893.
Gould, G. M. The mysteries and sources of suicide. Medical Record, N. Y., 1906, LXX, 361–366.
Gradenigo. Deer Ohr der Verbrechen. Wien, 1889.
Granier, C. La femme criminelle. Paris, 1906. 477 p. 12°.
Grasset, J. Le psychisme inférieur. Paris, 1906. 516 p. 8°.
Gray, J. A new instrument for determining the color of the hair, eyes, and skin. Man, VIII, 4, 54–58, April, 1908, London.

Griesinger, W. Die Pathologie und Therapie der psychischen Krankheiten. II. Aufl. Stuttgart, 1867. S. 240.
Grosmorlard. Criminalité juvénile. Arch. d'anthrop. crim. Lyon et Paris, 1903, XVIII, 129, 193, 257.
——— Les jeunes criminels en correction. Arch. d'anthrop. crim., Lyon et Paris, 1904, XIX, 341, 455.
Grossmann, W. H. The position of the atypical child. J. Nerv. & Ment. Dis., N. Y., 1906, XXXIII, 425–446.
Gross, H. Criminal investigation, 1907.
Guarnieri-Ventimiglia. La delinquenza e la correzione dei minorenni. Roma-Torino. Roux e Viarengo, 1906.
Guégo. Statistique de la criminalité en France de 1826–1900. [Rap. de Brouardel.] Compt. rend. Acad. d. sc., Paris, 1904, CXXXIX, 1129.
Guillaume. Der Selbstmord in der Schweiz. Korresp. Blt. für schweizer. Aerzte, 1895, S. 722.
Gvozdeff, I. M. (In Russian). On inborn and acquired peculiarities of children as beginnings of criminality in adults. 8°. Kazan, 1886.
Hall, G. Stanley. Adolescence; its psychology and its relations to physiology, anthropology, sociology, sex, crime, religion, and education. 2 vols. N. Y., 1904, D. Appleton & Co., 611, 790 p. Roy. 8°.
van Hamel, G. A. Réforme pénale au point de vue anthropologique et psychiatrique. (Rap.) Belgique méd., Gand-Haarlem, 1906, XIII, 183–186.
——— Traitement des jeunes criminels dans le droit pénal et dans la discipline pénitentiaire, suivant les principes de l'anthropologie criminelle. Arch. di psichiat. (etc.), Torino, 1906. XXVII, 375–377.
Hammer, W. Ueber einen Fall von Algolagnie (Schmerzgeilheit) im Kindesalter. Monatschr. f. Harnkr. u. sex. Hyg., Leipz., 1904, 131–133.
Happy criminal. Blackwood's Mag., CLXXXII, 845–852, 1907.
Harrisson, E. H. Abnormalities of the palate. Journl. Ment. Sci., 49, 1903.
Hartenberg, P. Physionomie et caractère. Paris, 1908.
Haussner. Zur Literatur der Kriminalistik. Arch. f. Krim.-Anthrop. u. Kriminalist., Leipzig, 1903, XIV, 1; 1904, XV, 1.
Hawley, D. E. Heredity and environment as causes of delinquency and crime. Bull. Amer. Acad. Med., Easton, Pa., 1905–6, VII, 533–545.
Heim, Hugo. Die jüngsten und ältesten Verbrecher. 223 p. Berlin, Wiegand u. Griehen.
Heller, A. Zur Lehre zum Selbstmorde nach 300 seccionen. München. Med. Wolchenschrift, 1900, XLVII, 1653–1658.
Hes, B. Berechting van jeugdige Delinquenten. Gröningen, 1905. 232 Seiten.
Heyfelder. Der Selbstmord in arznei-gerichtlicher und in medizinisch-polizeilicher Beziehung. Berlin, 1828, S. 6.
Holmes, T. Youthful offenders and parental responsibility. Contemp. Rev., LXXVII, 845–854, 1900.
Hoppe, Hugo. Alkohol und Kriminalität. Wiesbaden, 1906. 214 p.
Howe, F. C. Cleveland in the life-saving business. Outlook, LXXXVIII, 123–127, Jan. 18, 1908.
Huet. Clinique médicale de la maison penitenciaire des jeunes détenus. Union médicale, 1860.
Hurley, T. D. Development of the juvenile court idea. Charities, XI, 423–425, 1903.
Ioachinesthal, G. Die angeborene Verbildungen der oberen Extremitäten. Hamburg, 1900.
Joly, Henry. Jeunes criminels parisiens. Arch. d'anthrop., Paris, 1890, V, 147, 393.
——— L'enfance coupable. Paris, Victor Lecoffre, 1904, 223 p.
Joly, Jules. Les jeunes criminelles. Rev. pénitentiaire, mai 1904.
Jordon, D. S. Degeneration, 1907.
Jude, R. Les dégénérés dans les bataillons d'Afrique. Paris, 1907, 118 p.
Juvenile delinquency (edit.). County and Municipal Rec., Glasgow and Edinburgh, 1905, V, 185–189.
Kahn, P. Traitement des jeunes crminels dans l.
Keller, F. A. Childhood influences and the criminal negro. Arena, XXVI, 304–310, 1901.
Kelly, R. L. Psycho-physical tests of normal and abnormal children; a comparative study. Psychol. Rev., N. Y., 1903, X, 345–372.
Kelsey, C. Juvenile court in Chicago and its work. Ann. Amer. Acad., XVII, 298–304, 1901.

Kende, Moritz. Die Entartung des Menschengeschlechts, ihre Ursachen und die Mittel zu ihrer Bekämpfung. Halle a. S., 1902. 136 Seiten.
Kirn. Ueber die Degeneration in Verbrecher. Allg. Zeitsch. für Psychiatrie, 1889.
Kitka. Ueber die Zurechnungsfähigkeit jugendlicher Personen auf dem Gebiete des Kriminalrechts mit Rücksicht auf deren Alter. Archiv des Kriminalrechts, 1834.
Kleine, Marcel. Les tribunaux pour enfants en Angleterre. Paris, 1908. 92 p.
Klippel et Lefas. Sur deux cas de thorax en entonnoir d'origine congénital. Soc. de neurol. de Paris, 3 juillet 1902, Rev. neurol., 1902, p. 632.
Knecht. Ueber die Verbreitung physischer Degeneration bei Verbrechern und die Beziehungen zwischen Degenerationszeichen und Neuropathien. Allg. Zeitschr. f. Psychiatrie, Berlin, 1883.
Koren, J. Some statistics of recidivism among misdemeanants of Boston. Amer. Statis. Assoc., 1901.
Kühner, A. Jugendgerichte, eine zeitgemässe Forderung. Kinderarzt, Leipzig, 1904, XV, 173–179.
Kun, B., et Laday, E. La lutte contre la criminalité des mineurs en Hongrie. Budapest, 1906.
Kupferschmid, W. Enquête über die verschiedenartigen Organisationen der Schutz-Aufricht über entlassene Sträflinge in der Kantonen der Schweiz. Ztschr. f. Schweiz. Statistik, XLII, p. 277, 1906.
Kurella. Naturgeschichte des Verbrechers. Stuttgart, 1893.
Lascassagne, Rousset, Papillon. L'affaire Reidal; un cas de sadisme sanguinaire congénital. Arch. anthrop. crim., 1907, p. 665–766.
Laurent, Émile. Les dégénérés dans les prisons. Arch. d'anthrop. criminelle, 1888.
——— La criminalité infantile. Paris, 1906, A. Maloine. 170 p. 8°.
Laurent, J. Attentat à la pudeur sur une fillette de 7 ans par des garçonnets de 13, 12 et 6 ans. J. de méd. de Paris, 1907, 2. s., XIX, 455, 505.
de Laurien et Roman. Études sur les colonies agricoles de mendiants. Paris, 1851.
Leboucq. De la brachydactylie et de l'hyperphalangie chez l'homme. Bull. Acad. de Belgique, 1896.
Leeds society for the reformation of juvenile offenders. Annual report of the committee, etc., 1883. 8°. Leeds, 1884.
Lemaitre, A. À propos des suicides de jeunes gens. Arch. de psychol., Genève. 1904–5, IV, 358–361.
Lengweiler, R. Die Zwangserziehung der verwahrlosten, lasterhaften und verbrecherischen Jugend. Eine kriminalpolitische Studie. (Bern.) 8°. St. Gallen, 1895.
Leroy, R. Examen médico-légal d'une jeune incendiaire. Bull. Soc. méd. de l'Yonne, 1904, Auxerre, 1905, XIV, 54–62.
Les délits commis par les enfants. Mod. Méd., Paris, 1900, XI, 166–167.
Levoz. La protection de l'enfance en Belgique. Bruxelles, Goemare, 1902, 497 p. 8°.
Lewis, O. F. Would-be suicides. Charities, etc. New York, 1907, XVIII, 80–82.
Lindsey, B. B. Boy and the court; Colorado law and its administration. Charities, XIII, 350–357, 1905.
——— Child of the South. Charities, XIX, 1363–1367, Jan. 4, 1908.
Lionville, H. Hygiène des jeunes détenus; les colonies agricoles et maritimes. Cong. internat. d'hyg. et de démog. Compt. rendu, 1882, Genève, 1883, II, 256–258.
Lobedank. Der physiologische Schwachsinn des Menschen. München, 1905. 59 p. 8°.
Lohsing, E. Reflexionen über den Fall eines Jugendlichen. Arch. f. Krim.-Anthrop. u. Kriminalist., Leipzig, 1904–5, XVIII, 63–87.
Lombroso, C. Precocity in crime. Independent, LIV, 2136–2138, 1902.
Lombroso, P. Cesare Lombroso. Appunti sulla vita. Torino, 1906. 234 p. 16°.
Longo, Michele. Psicologia criminale. Torino, 1906. 290 p. 8°.
Lucas. Le pavillon de l'oreille; valeur de ses anomalies comme stigmates de dégénérescence. Thèse de Bordeaux, 1900, p. 64.
de Luna, Antonio, *marchese*. Il suicidio nel diritto e nella vita sociale. Roma, 1907. 174 p. 8°.

de Lurien et Roman. Études sur les colonies agricoles de mendiants, jeunes détenus, orphelins et enfants trouvés en Hollande, Suisse, Belgique et France. Paris, 1851.
MacDonald, Arthur. A sadistic murder. Medico-Legal Journal, N. Y. City, March, 1907.
——— Studies of juvenile criminals. Medical Record, N. Y. City, July 20, 1907.
——— Post mortems of suicide. Medical Times, N. Y. City, June, 1907.
——— Reform of juvenile criminals. Pedagogical Seminary, Dec., 1907. Worcester, Mass.
——— Decay of family life and increase of child crime. Education for September, 1907. Boston, Mass.
——— Statistics of child suicide. Amer. Statistical Association, 1907; also published in Japanese by Tokyo Statistical Society, 1907.
——— Moral stigmata of degeneration. The Monist, Chicago, January, 1908.
——— Marcas morales de degeneración. Mem. Soc. cient. "Antonio Alzate," México, 1906–7, XXIV, 477–491.
——— Estigmas físicos de degeneración. Crónica médica-quirúrgica de la Habana, septiembre, octubre y diciembre, 1907.
——— Mental stigmata of degeneration. Buffalo (N. Y.) Medical Journal, August, 1907.
——— Physical stigmata of degeneration. Med. Fortnightly, St. Louis, July 25, 1907.
——— Reform of wayward youth. The Sewanee Rev., Sewanee, Tenn., January, 1908.
——— Study of the criminal, pauper, and defective classes. Statement before the Committee on Education and Labor, United States Senate, in support of bill (S. 3066) to establish a laboratory, etc. 125 pages. Feb. 1, 1908.
——— A plan for the study of man. Bulletin de l'Académie Impériale des Sciences de S. Petersbourge, VI série, 1 Fevrier, 1908. The same in Revista Medica de Begota. Febrero de 1908.
Mackenzie, J. S. The problem of moral instruction. Internat. Jour. of Ethics, XVIII, 273–291, April, 1908. Philadelphia.
Magnan et Legrain. Des dégénérés. Paris, 1895.
Manheimer, Marcel. Les troubles mentaux de l'enfance etc. Paris, 1899, p. 138, 177 et 178.
Mapes, C. C. Suicide in children. Med. Age., Detroit, 1903, XXI, 289–295.
MacQueary, T. H. Courts in Illinois. Amer. J. Soc., IX, 19–22, 1903.
Mapes, C. C. Influence of the daily press as an incentive to suicide and other crimes. Med. Age, Detroit, 1906, XXIV, 885–893.
Maraudon de Montyel. Des anomalies des organes génitaux externes et de leurs rapports avec la dégénérescence et la criminalité. Archives d' anthrop. crim., 1895.
Masaryk. Der Selbstmord als soziale Massenerscheinung. Wien, 1881, S. 176.
Masselon, René. La mélancolie. Étude médicale et psychologique. Paris, 1906. 284 p. 12°.
Maupaté, L. Recherches d'anthropologie criminelle chez l'enfant. Criminalité et dégénérescence. (Paris.) 4°. Lyon, 1893.
Mayet, L. Les stigmates anatomiques de la dégénérescence. Gazette des hôpitaux, 5 et 12 janvier 1901.
McKennon, T. M. T., and Walker, W. K. Homicide by a boy during a stage of somnambulistic automatism. Med. News, N. Y., 1905, LXXXVI, 149–157.
Meige, H. L'infantisme, le féminisme et les hermaphrodites antiques. L'anthropologie, 1895.
Mercante, Victor. Estudios de criminología infantil. Arch. de criminol. (etc.), Buenos Aires, 1902, I, 309–413, 463–468.
du Mesnil, O. Un jeunes detenus à la Roquette et dans les colonies agricoles. 1883, II, 116.
Mercier, Charles. Criminal responsibility. Oxford, 1905, 232 p. 8°.
Mercier, M. Un adolescent dégénéré, déséquilibré et criminel. Ann. d'hyg., Paris, 1904, 4 s., II, 108–126.
du Mesnil, O. Les jeunes détenus à la Roquette et dans les colonies agricoles. Hygiène, moralisation et mortalité; modifications que réclame le régime actuel. 8°. Paris, 1866. Also in: Ann. d'hyg., Paris, 1866, 2. s., XXV, 241–289.
Modi, Sul N. J. J. Suicides and old age. Jour. Anthrop. Society, Bombay, 1904–7, VII, 577–590.

Mönkemöller. Geistesstörung und Verbrechen im Kindesalter. Berlin, 1903. p. 108.
Montgomery, H. J. B. Crime and criminals. Nineteenth Century, LXIII, 80–89, 1908.
Montyel, E. Contribution à l'étude clinique des rapports de la criminalité et de la dégénérescence. Arch. de l'anthrop. crim., Paris, 1892, VII, 264–293.
Moore, J. J. A plea for the more careful study of the individuality and defects of children. Pediatrics, N. Y., 1907, XIX, 680–685.
Moral training in the public schools. Educational Foundations, April, 1908, 505–512.
Moreau, Jacques. Du suicide chez les enfants. Paris, 1906. 110 p. 8°.
Moreau, P. Quelques considérations médico-légales sur les attentats commis par les enfants. Ann. d'hyg., Paris, 1891, 3. s., XXVI, 531–535.
——— De l'insuffisance du code pénal à l'égard de l'enfant criminel; nécessité de la création d'asiles spéciaux. Ann. de psychiat. et hypnol., Paris, 1893, n. s., III, 200–204; also in Rev. de méd. lég. de Paris, 1893, 2. s., V, 373–376. 2. s., V, 373–376.
Morel. Traité de dégénérescence physique intellectuelle et morale de la sphère humaine. Paris, 1857.
Morison, W. Douglas. Juvenile offenders. London, Fisher Unwin, 1896, 317 p.
Motet. Les faux témoignages des enfants devant la justice. Courrier méd., Paris, 1887, XXXVII, 162–165; also in Nice Méd., 1887–8, XII, 1–9.
——— Les mobiles du délit et du crime chez l'enfant et chez l'adulte. Actes Cong. internat. d'anthrop. crim., 1892, Bruxelles, 1893, III, 247–252.
Mouret. Thèse (sur l'enfance coupable) de doctorat en médecine soutenue le 27 avril 1903 à la Faculté de Lyon.
Mouret, Louis Victor. Contribution médico-légale à l'étude du patronage de l'enfance coupable. Lyon, 1903, 163 p. 8°.
Moyet. Les stigmates anatomiques et physiolgiques de la dégénérescence, etc. Lyon-Paris, Stork, 164 p.
Müller. Pathological anatomy of child suicides. Oesterr. med. Jahrbuch, 1844, VII.
Münsterberg, Hugo. Hypnotism and crime. McClure, May, XXX, 317–322, 1908.
Nacke, P. Étude comparative des signes de dégénérés, etc. Actes du 3e Congrès d'anthrop. crim., 1892.
——— Le valeur des signes de dégénération. Annals médico-psychologique, 1894.
——— Identitätsnachweiss an Kindern. Arch. f. Krim.-Anthrop. und Kriminalist, Leipzig, 1907, XXVIII, 346–357.
Nibecker, F. H. Education of juvenile delinquents. Ann. Amer. Acad., XXIII, 483–492, 1904.
Niceforo, A. Lo studio antropologico delle classi povere. Ramazzioni, Firenze, 1907, 1, 5–15, 192–211.
Nina-Rodrigues. Métissage, dégénérescence et crime. Arch. d'anthrop. crim., t. 14, 477, Lyon, 1899.
Nordau, Max. Degeneration.
von Oettingen. Die Moralstatistik und ihre Bedeutung für eine Sociologie. Erlangen, 1882, S. 489.
Opera, L', di Cesare Lombroso nella scienza e nelle sue applicazioni. Torino, 1906. 421 p. 8°.
Oppenheimer, F. Der Selbstmord im kindlichen Lebensalter. Med. Wochenschr., Berlin, 1901, II, 309–313.
Parker, F. E. Capital punishment, etc. 1907.
Patell, K. B. B. B. Statistics of suicides in Bombay during the year 1905. J. Anthrop. Soc., Bombay, 1906, VII, 398–410.
Pautet, G. De l'hémimimie faciale d'origine otique. Thèse de Lyon, 1900.
Périer, E. Le suicide chez l'enfant et l'adolescent. Annales de méd. et de chirurgie infantiles, Paris, 15 novembre, 1899.
Pettigrove, F. G. Statistics of crime in Massachusetts. Amer. Statistical Assoc., 1893.
Philanthropic Society, London. Reformation of juvenile offenders. The philanthropic farm school, Readhill, Surrey. 12°, Reigate, 1850.
Philipe, J., et Paul-Boncour, G. Les anomalies mentales chez les écoliers. Paris, 1905.
de Pietra Santa. La correction paternelle. J. d'hyg., Paris, 1895, XX, 469, 484.

Pike, G. H. Decrease of juvenile crime. Westm., CLXIX, 217–221, Feb,, 1908.
Pilcz, A. Zur Lehre vom Selbstmord. Jahrb. f. Psychiat., Leipzig und Wien, 1905, XXVI, 294–310.
Pinsero, N. Sulla punizione del delinquenti minorenni. Scuola positiva, Roma, 1893, III, 1060–1070.
Porter, T. R. Boy policeman of Council Bluffs. World To-Day, XIV, 73–75, Jan., 1908.
Prendergast, L. The development of the reformatory and industrial school in England. Tr. VII. Internat. Cong. Hyg. & Demog., London, 1892, IV, 146–170.
Prinzing, L. Trunksucht und Selbstmord. Leipzig, 1895, S. 26.
Proal, L. Education et suicides d'enfants. Arch. d'anthrop crim., Lyon et Paris, 1905, XX, 369, 441.
——— L'éducation et le suicide des enfants. Paris, 1907. 212 p. 16°.
Prozoroff, L. Victims of the Russian revolution (in Russian language). Russk. Vrach, St. Petersburg, 1906, V, 1313–1316.
Puffer, J. Adams. Boys' gangs. Pedagog. Sem., XII, 175–212, 1905.
Rabaud, E. Origine et transformations de la notion de dégénéré. Rev. de l'école de l'anthropologie de Paris, 1907, XVII, 37–46.
Rassier, F. De la valeur du témoignage des enfants en justice. Thèse, Lyon.
Raux, M. Nos jeunes détenus, etc. Lyon et Paris, 1890.
——— L'enfance coupable. Arch. de l'anthrop., Paris, 1890, V, 221–258.
Raymond, F., et Janet, P. Malformations des mains en pinces de homard et asymétrie du corps chez une épileptique. Nouvelle iconographie de la Salpêtrière, X, 1897, p. 369.
Rebeillard, E. Les enfants assistés. Paris, 1908. 340 p.
Reformation of juvenile offenders in Illinois. Amer. J. Scoiol., VIII, 644.
Régis, E. Les anormeaux psychiques des écoles. Rev. de l'hypnotisme et psychol. physiol., Paris, 1907–8, XXII, 151–155.
Rehfisch. Der Selbstmord. Berlin, 1893, S. 7.
Reyes, L. Contribution à l'étude de l'état mental chez les enfants dégénérés. Paris, 1890.
Rhoades, M. C. Case study of delinquent boys in the juvenile courts of Chicago. Chicago, 1907.
Richman, J. Incorrigible child. Educ. Rev., XXXI, 484–506, 1906.
Riis, J. A. Care of the home of refuge. Charities, XI, 28–29, 1903.
Rollet et Tourel. Les enfants en prison. Paris, 1892.
Rost, H. Der Selbstmord in den Städten. Allg. statist. Arch., Tübingen, 1904, VI, 263–281.
——— Der Selbstmord als sozialstatistische Erscheinung. Köln, 1905. 115 p. 8°.
Rouby. Histoire d'une petite fille assassin. Arch. d'anthrop. crim., Lyon et Paris, 1901, XVI, 270–281.
Roussel, T. L'enfant à tendances criminelles ou placé dans un milieu criminel. Tr. VII. Internat. Cong. Hyg. & Demog. 1891, London, 1892, IV, 170–175.
Ruiz Amado, P. R. La educación moral. Barcelona, 1907. 635 p. 8°.
Rushton, E. A letter addressed to the town council and select vestry of the borough of Liverpool upon juvenile crime, together with a petition upon the same subject presented to both houses of Parliament in 1846. 8°. Liverpool, 1850.
de Ryckère, R. La servante criminelle; étude de criminologie professionnelle. Paris, 1907, 465 p. 8°.
Sageret, Jules. Zola fouriériste. La Grande Rev., avril 10, 1908, Paris.
Salford. Special report on the state of juvenile education and delinquency in the borough of Salford . . . on ragged or industrial schools, etc. By Stephen Neal. 8°. Salford, 1851.
de Sanctis, G. Sulla delinquenza dei minorenni. Riv. di diritto penali e sociologia criminali, maggio e giugno 1900.
de Sanctis, S. L'idiomicrocephalia. Sullo anatomo-patologico con due tavole. Annali di Nevr., XXIII, Fasc. IV. 1900.
Sanné, O. Art. hydrocéphalie, in Dict. encycl. des sciences méd.
de Sario, F. I piccoli candidati alla delinquenza. Arch. di psichiat. (etc.), Torino, 1892, XIII, 301–327.
Schallmayer, W. Cultur und Entartung. Sociale Med. u. Hyg., Hamburg, 1906, I, 481.
Schmölder. Die verwahrlosten Kinder und die jugendlichen Verbrecher. Gerichtssaal, Bd. XLIX.

Schroeder, T. Criminal anarchy law, etc. 1907.
Schultze, Ernest. Weitere psychiatrische Beobachtungen an Militärgenfangenen mit klinischen kriminal-psychologischen und praktischen Ergebnissen, etc., von 100 Fällen. Jena, 1907. G. Fisher. 138 p. 8°.
Schwekendick, E. Untersuchung an zehn Gehirnen von Verbrechern und Selbstmördern. Würzburg, 1881. (Also in Verhandlungen der physikalisch-med. Gesellschaft in Würzburg, n. F., Bd. XVI, S. 243.)
Séglas, J. De l'examen morphologiques chez les aliénés et les idiots. Nouvelle iconographie de la Salpêtrière, 1891, pp. 206–217, 274–300.
Shaw, T. C. Suicide and sanity. Laucet, London, 1907, I, 1067–1069.
——— A contribution to the analysis of the mental process in criminal acts. Lancet, London, 1907, II, 1306–1309.
Shipley, M. Results of abolishment of capital punishment in Belgium. Amer. Statist. Assoc., 1905.
Shtshegloff, A. Capacity for mental work of juvenile criminals. Vestnik Psikhol., Krim. Anthrop., St. Petersburg, 1904, I, 106–113.
Siefert. Der Fall eines Jugendlichen. Arch. f. Krim., Anthrop. u. Kriminalist., Leipzig, 1902, X, 279–281.
Siegert, Gustav. Das Problem der Kinderselbstmorde. Leipzig, 1893, Seite 42.
Siffredi, A. Studio su 80 minorenni criminali. Arch. id psichiat. (etc.), Torino, 1882, III, 148.
Simon. Recherches anthropométriques sur 223 garçons anormaux âgés de 8 à 23 ans. L'année psychologique, 1899, V. Paris.
Singer, K. Armenstatistik Münchens. München, 1908. 47 p.
Smith, P. C. Degeneracy. Edinb. Med. Jour., 1907, m. s., XXI, 117, 236.
De Smeth, J. Dégénérescence et criminalité; sommaire analytique d'un entretien clinique. Ann. Soc. de méd. lég. de Belg., 1893–4, V, 113–124.
Snedden, D. Juvenile delinquency, the public school, etc. Educa. Rev., April, 1907.
——— Administration and educational work of American juvenile reformatories. 1907. Columbia Univ., New York.
Society for the Reformation of Juvenile Delinquents, New York City. Annual reports of the managers to the legislature of the State and the corporation of the city of New York. 1.–7., 1825, etc. 8°. New York, 1832–1880.
Solaro, A. I suicidii nell' età infantile. Pediatria, Napoli, 1904, 2 s., II, 553–557.
Solovitzoff, N. Les diformités du système nerveux central dans la spina bifida, etc. Nouvelle Iconographie de la Salpêtrière, 1901.
Souzaleite. De l'acromégalie. Thèse de Paris, 1890.
Spearman, E. Juvenile reformatories in France. Nineteenth Century, London, 1898, XLIII, 626–669.
Speranza, G. C. Criminality in children. Green Bag, XV, 516.
Stark. Ueber Selbstmord im Kindesalter. Der Irrenfreund, XII. Jahrg., 1870, S. 52.
Statham, F. R. Society and the criminal. Fortnightly Rev., LXXXVIII, 1019–1030, 1907.
Stelzner, Helene Friederike. Analyse von 300 Selbstmordfällen, etc. Berlin, 1906. 124 p. 8°.
Stephens, G. A. The juvenile court system of Kansas. Topeka, 1906. 122 p.
Sturdy, W. A. Degeneracy of aristocracy. 1907.
Styles, G. Suicide and its increase. Amer. Jour. Insanity, 1900, VI, 33–37.
Sullivan, W. C. Alcoholism; a chapter in social pathology. London, 1906.
Sutherland, J. F. Recidivism regarded from the environmental and psychopathological standpoints. Jour. of Mental Science, London, January, 1908.
Swift, E. J. Criminal tendencies in boyhood. Pedagog. Sem., VIII, 65.
Talbot, E. S. Juveline female delinquents. Alienist and Neurol., St. Louis, 1902, XXIII, 163–175.
Talbot, E. S. Juvenile female delinquents. Alienist and Neurol., St. Louis, 1897. XII, 452–472.
Tarde, G. La jeunesse criminelle. Arch. d'anthrop. crim., Lyon et Paris, 1897. XII, 452–472.
——— La criminalité juvénile en France et en Angleterre. Revue pédag. française, juin 1897.
Tarnowski, E. Les crimes politiques en Russie. Arch. de l'anthrop. crim., Lyon et Paris, 1907, XXII, 40–57.
Tarnowsky, Pauline. Les femmes homicides. Paris, 1908.
Taverni et Magan. De l'enfance des criminels dans ses rapports avec la prédisposition naturelle au crime. Congrès de Paris, 1889, p. 47.

Taverni, R., et Magnan. L' infanzia dei criminali nei suoi rapporti con la predisposizione naturale al crimine. Anomalo, Napoli, 1889, I, 361–368; 1890, II, 3–12.
Teissier, J. Valeur diagnostique de l'indice céphalique. Bull. de la Soc. d'anthropol. de Lyon, 1892–1897.
Thival. Criminalité juvénile. Lyon, 1904, A. Rey cie. 98 p. 8°.
Thurston, H. W. Social significance of the juvenile court. School Rev., XIV, 415–424, 1906.
Tönnies. Jugendliche Kriminalität and Verwahrlosung in Grossbritanien, Zietschr. f. d. gesamte Strafrechtswissensch., Bd. XIII.
Tonninni. Degenerazione e criminalità. Arch. ital. per la mal. nerv., janv. et mars 1890.
Toulouse. Études sociales. Les leçons de la vie. Paris, 1906. 318 p. 12°.
Toulzac. Attentat aux mœurs dégénérescence mentale, etc. Rev. de méd. lég., Paris, 1907, XIV, 357–360.
Tourrence, Éd. État mental des incendiaires. Paris, 1906. 112 p. 8°.
Travis, T. Young malefactor. New York, 1908.
Trevarthen, J. Hooliganism. Nineteenth Century, XLIX, 84–89, 1901.
Triplett, N. A study of the faults of children. Pedagog. Semin., Worcester, Mass., 1903, X, 200–238.
Trüper, J. Zur Frage der Behandlung unserer jugendlichen Missetäter. Zeitschr. f. Kinderforschung, 1906, Langensalza.
Tuczek. Ueber das pathologische Element in der Kriminalität der Jugendlichen. Der Gerichtssaal, Bd. 65, Heft 1–3; auch in der Zeitschr. f. klin. Medizin, Bd. LIII.
Ungewitter. Jugendlicher Brandstifter. Arch. f. Krim.-Anthrop. u. Kriminalist., Leipzig, 1906, XXI, 345.
Vachide et Vurpas. Considérations pathologiques sur les monstruosités humaines, etc. Arch. de méd. expérimentale, mai, 1092.
——— Les signes physiques de dégénérescence. Annali di nevrologia, XXI, 5–72, Napoli, 1903.
Veratti, G. I minorenni corriggendi. 12°. Bologna, 1887.
Völter. Geschichte und Statistik der Rettungsanstalten für arme, verwahrloster Kinder in Württemberg. Stuttgart, 1845.
de Vries-Feyens, G. I. La délinquence juvénile. Arch. d'anthrop. crim., Lyon et Paris, 1904, XIX, 922–925.
Wadler, Arnold. Die Verbrechensbewegung im östlichen Europa. München, 1908. 270 p.
Ward, F. Agricultural education for delinquent boys. World To-Day, XIV, 306–308, Jan., 1908.
Warda. Ueber degenerative Ohrformen. Psychiatrie, XXXII, Fasc. 1, 1899.
Warwick, C. Physical deterioration. Fort. Rev., 1906, p. 504.
Wateft, S. Tâches pigmentaires chez les enfants bulgares. Bull. et mém. Soc. d'anthrop. de Paris.
Weinberg, R. Psychische Degeneration, Kriminalität und Rasse. Monatschrift f. Krim.-Psychol., Heidelberg, 1906, II, 720–730.
Weissenberg. Die Formen der Hand und des Fusses. Zeitschr. f. Ethnologie, Bd. XXVII, 1895.
Wey, H. D. Physical training of youthful criminals. A reprint of a paper read before the Nature Prison Association. Boston, 1888.
White, G. M. From Boniface to bank burglar. 1907.
Whitlock, Brant. Prison system and our police magistrates. Everybody's Mag., May, 1907.
Wiedemann. Gesetz btr. die Unterbringung verwahrloster Kinder. 1887.
Williamson, E. E. Probation and juvenile courts. Ann. Amer. Acad., XX, 259–267, 1902.
Wills, A. Crime and criminals. Nineteenth Century, LXII, 879–894, 1907.
Windelband, W. Ueber Norm und Normalität. Monatschr. f. Krim.-Psychol. (etc.), Heidelberg, 1906–7, II, 1–13.
Witmer, F. A. Stigmata of degeneration in epilepsy. Pediatrics, Vol. 4, No. 7.
Worolieff, W. Stigmates physiques des dégénérés. Soc. de neurol. et psych. de Moscou, 22 janv. 1899.
Wulffen, Dr., Jur. Zur Kriminalpsychologie des Kindes. Monatschrift f. Kriminalpsychologie, Bd. II, 1905.
Young criminals. Sat. Rev., XCD, 550, 558.
Zoccoli. Die Anarchie, ihre Vorkünder, ihre Ideen, ihre Taten. Leipzig, 1907.

XXV. RESOLUTION ADOPTED BY THE SIXTH INTERNATIONAL CONGRESS OF CRIMINAL ANTHROPOLOGY, OF EUROPE, AS TO THE TREATMENT OF JUVENILE CRIME.

The International Congress of Criminal Anthropology, of Europe, is the one authority, if there be any authority, on questions of crime and its relation to other subjects. Its membership consists of the most distinguished university specialists in criminology, medicine, law, and sociology from all countries of the world, though it is practically a European congress. It meets once every five years.

This congress represents a new movement from the side of the university to undertake the scientific study of criminal man in all his relations. It is necessarily a humanitarian as well as a scientific organization. This is especially brought out by a resolution passed at its last meeting in Turin, Italy.

The resolution is as follows:

In order to prevent and combat juvenile crime, prophylactic, penal, and penitentiary measures should be employed, which are based upon an educative principle:

(*a.*) As prophylactic measures: (1) Protection in family and school, and apprenticeship in trade; (2) judicial privation of the exercise of paternal power by unworthy parents; (3) the placing of children in good families, especially in the country; (4) establishment of institutions for special care.

(*b.*) In regard to penal and penitentiary treatment, instead of the traditional theoretic formula of discernment, the justice should be allowed unlimited, or almost unlimited, freedom according to the exigencies of each case, to choose among a series of measures modeled in their general traits after domestic discipline as: (1) Admonition, (2) small fines taken from the salary of the young person, (3) confinement for a short time in a disciplinary pedagogic institutions, (4) conditional sentence, (5) placed at the disposition of the Government for a systematic and professional education, until the age of majority, in State or private institutions, or in families under the control of the State, with conditional liberation as a measure of probation.

(*c.*) All treatment of young criminals, or those who run the risk of becoming such, should be preceded always by a medico-psychological examination of the individual and inquiries as to antecedents. These examinations should be renewed periodically. In all treatment the psychological physician should have absolute recognition, so that he can order, if necessary, especially for feeble-minded children, a medico-pedagogical treatment.

From a theoretical as well as a practical point of view the treatment of young criminals should be the prototype for the treatment of adults.

It is desirable that the procedure against young criminals should have as little publicity as possible.

PATHO-SOCIAL, EDUCATIONAL, AND PSYCHO-PHYSICAL WORKS BY AUTHOR.

ABNORMAL MAN, being essays on education and crime, criminal sociology, criminal hypnotism, alcoholism, insanity, and genius, with digests of literature and a bibliography. 1893. Published by U. S. Bureau of Education. Washington, D. C. 445 pages. 8°. 2d edition, 1895.

CRIMINOLOGY, a psychological and scientific study of criminals, criminal contagion, criminal hypnotism, and recidivation, with introduction by Lombroso. Bibliography. Second edition. New York, 1894. Funk & Wagnalls, publishers. 416 pages. 12°.

LE CRIMINEL-TYPE dans quelques formes graves de la criminalité; Jesse Pomeroy, "The boy torturer;" Piper, "The brainer" (Belfry case, Boston); "Jack, the Ripper" (de Londres). Bibliographie de sexualité pathologique. Troisième édition. Un volume en 8°, illustré de portraits. Publié par A. Storck, Lyon, et G. Masson, Paris, 1895. 300 pages. *This work is not published in English.*

EDUCATION AND PATHO-SOCIAL STUDIES, including an investigation of the murderer "H." (Holmes); reports on psychological, criminological, and demographical congresses in Europe; London slums and Gen. Booth's Salvation Army movement. Reprint (from Annual Report of U. S. Commissioner of Education for 1893–94). 57 pages. 8°. Washington, D. C.

ÉMILE ZOLA, a psycho-physical study of Zola's personality, with illustrations; his physical and mental peculiarities; nervous system, finger imprints, morbid ideas, etc.; visual perceptions, hearing, smell, tactile sensations, perception of time, association of ideas and suggestibility; character, method of work, etc.; with bibliography. Reprints (from Open Court, August, 1898, with appendix (34 pages), and "Practical Psychology," August, 1901), 1901. Gratis on application to author.

EXPERIMENTAL STUDY OF CHILDREN, including anthropometrical and psycho-physical measurements of Washington school children; measurements of school children in United States and Europe; description of instruments of precision in the laboratory of the Bureau of Education; child study in the United States; and a bibliography. Reprint (from Annual Report of U. S. Commissioner of Education for 1897–98). 325 pages. 8°. Washington, D, C., 1899.

HEARING ON THE BILL (H. R. 14798) to establish a laboratory for the study of the criminal, pauper, and defective classes, treating especially of criminology with a bibliography of genius, insanity, idiocy, alcoholism, pauperism, and crime, had before the Committee on the Judiciary of the U. S. House of Representatives. 309 pages. 8°. Government Printing Office, Washington, D. C., 1902.

SENATE DOCUMENT No. 400 (57th Congress, 1st session): A plan for the study of man, with reference to bills to establish a laboratory for the study of the criminal, pauper, and defective classes, treating especially of hypnotism, with a bibliography of child study. 166 paegs. 8°. Government Printing Office, Washington, D. C., 1902. (166 pages.)

STATISTICS OF CRIME, SUICIDE, AND INSANITY and other forms of abnormality in different countries of the world, in connection with bills to establish a laboratory, etc. Senate Document No. 12, 58th Congress, special session. 8°. Government Printing Office, Washington, D. C., 1903. (195 pages.)

MAN AND ABNORMAL MAN, including a study of children, in connection with bills to establish laboratories under State and Federal governments in the study of the criminal, pauper, and defective classes, with bibliographies. Senate Document No. 187, 58th Congress, 3d session. 780 pages. 8°. Washington, D. C., 1905.

This document ("Man and Abnormal Man") includes in substance the matter contained in the six *Government publications* enumerated above.

EL CRIMINAL TIPO en algunas formas graves de la criminalidad. Madrid, La España Moderna, 1908. 170 pages. 8°. ***This work is not published in English.***

STUDY OF THE CRIMINAL, PAUPER, AND DEFECTIVE CLASSES, being statement of author before the Committee on Education and Labor of the United States Senate, in support of the bill (S. 3066) to establish a laboratory for such study. Washington, 1908. 125 pages. 8°.

This document treats specially of juvenile crime.

JUVENILE CRIME AND REFORMATION, including degeneration and other studies, being a hearing before a Sub-Committee on Judiciary of the United States House of Representatives, on the bill (H. R. 16733) to establish a laboratory for the study of the criminal, pauper, and defective classes. Washington, 1908. 323 pages, 8°.

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